



# TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

## MEETING MATERIALS

November 5, 2013

CALTRANS

BAY AREA TOLL AUTHORITY

CALIFORNIA TRANSPORTATION COMMISSION





## *Letter of Transmittal*

**TO:** Toll Bridge Program Oversight Committee  
(TBPOC)

**DATE:** October 29, 2013

**FR:** Program Management Team (PMT)

**RE:** TBPOC Meeting Materials Packet – November 5, 2013

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Herewith is the TBPOC Meeting Materials Packet for the November 5<sup>th</sup> meeting. The packet includes memoranda and reports that will be presented at the meeting. A Table of Contents is provided following the Agenda to help locate specific topics.

## *Final Agenda*

**TBPOC MEETING**  
**November 5, 2013, 10:00am – 3:00pm**  
**325 Burma Road, Oakland CA**  
**TBPOC-PMT site tour: 10:00am – 12:00pm**  
**TBPOC pre-meeting: 12:00pm – 1:00pm**  
**TBPOC meeting: 1:00pm – 3:00pm**

	<b>Topic</b>	<b>Presenter</b>	<b>Time</b>	<b>Desired Outcome</b>
<b>1.</b>	<b>CHAIR'S REPORT</b>	S. Heminger, BATA		Information
<b>2.</b>	<b>CONSENT CALENDAR</b>			
	a. TBPOC Conference Call/ Meeting Minutes	A. Fremier, BATA		Approval
	1. TBPOC October 3, 2013 Minutes			
	b. Contract Change Orders (CCOs)	D. Noel, CTC		Approval
	1. CCO 21-S3 (YBITS1 Storm Water Pollution Prevention)*			
	2. CCO 127 (OTD2 Stage 3 Hazardous Soil Disposal)*			
<b>3.</b>	<b>PROGRESS REPORTS</b>			
	a. 2013 Third Quarter Risk Management – YBITS2 Breakdown*	R. Foley, CT	15 min	Information
	b. Capital Outlay Support (COS) Update	T. Anziano, CT	15 min	Information
	c. 2013 Third Quarter Project Progress and Financial Update**	A. Fremier, BATA	5 min	Approval
<b>4.</b>	<b>SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES</b>			
	a. E2 Update			
	1. E2 CCOs***	T. Anziano, CT	15 min	Approval
	2. E2 Budget/ Testing***	T. Anziano, CT	15 min	Approval
	b. Corridor Update/ Schedule*	T. Anziano, CT	15 min	Information
	c. Update on Gateway Park and IERBYS *	A. Fremier, BATA	20 min	Approval
<b>5.</b>	<b>OTHER BUSINESS</b>			
	a. TBPOC 2014 Calendar	PMT	5 min	Information
	b. New Legislative Hearings (DeSaulnier)			
<b>Next TBPOC Meeting: December 12, 2013, 1:00pm – 4:00pm Sacramento, CA</b>				

\* Attachments

\*\*Attachments at front of binder

\*\*\*Attachments to be sent under separate cover

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### **TBPOC MEETING November 5, 2013**

<b>INDEX TAB</b>	<b>AGENDA ITEM</b>	<b>DESCRIPTION</b>
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<b>2</b>	<b>2</b>	<b>CONSENT CALENDAR</b> a. TBPOC Meeting Minutes 1. TBPOC October 3, 2013 Minutes*  b. Contract Change Orders (CCOs) 1. CCO 21-S3 (YBITS1 Storm Water Pollution Prevention)* 2. CCO 127 (OTD2 Stage 3 Hazardous Soil Disposal)*
<b>3</b>	<b>3</b>	<b>PROGRESS REPORTS</b> a. 2013 Third Quarter Risk Management – YBITS2 Breakdown*  b. Capital Outlay Support (COS) Update  c. 2013 Third Quarter Project Progress and Financial Update**
<b>4</b>	<b>4</b>	<b>SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES</b> a. E2 Update* 1. E2 CCOs*** 2. E2 Budget/Testing***  b. Corridor Update/Schedule*  c. Update on Gateway Park and IERBYS*
<b>5</b>	<b>5</b>	<b>OTHER BUSINESS</b> a. TBPOC 2014 Calendar

\* Attachments

\*\* Attachments at front of binder

\*\*\* Attachments to be sent under separate cover

## **ITEM 1: CHAIR'S REPORT**

**No Attachments**

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** October 29, 2013

**FR:** Andrew Fremier, Deputy Executive Director, Operations, BATA/MTC

**RE:** Agenda No. - 2a1  
Consent Calendar  
Item- TBPOC Meeting Minutes  
October 3, 2013 Meeting Minutes

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**Recommendation:**  
**APPROVAL**

**Cost:**  
NA

**Schedule Impacts:**  
NA

**Discussion:**  
The Program Management Team has reviewed and requests TBPOC approval of the October 3, 2013 Meeting Minutes.

**Attachment(s):**  
October 3, 2013 Meeting Minutes



# TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

## TBPOC MEETING MINUTES

October 3, 2013, 10:00am – 1:00pm

TBPOC-PMT pre-briefing: 10:00am – 11:00am

TBPOC meeting: 11:00am – 1:00pm

**Attendees:** TBPOC Members: Steve Heminger (Chair), Malcolm Dougherty, and Andre Boutros  
PMT Members: Tony Anziano, Andrew Fremier, and Stephen Maller  
Participants: Bill Casey, Michele DiFrancia, Rich Foley, Andrew Gordon, Ted Hall, Beatriz Lacson, Richard Land, Peter Lee, Brian Maroney, Saba Mohan, Dina Noel, Bijan Sartipi, Ken Terpstra, Patrick Treacy, and Deanna Vilcheck

Convened: 11:19 AM

Items		Action
1.	<b>CHAIR'S REPORT</b> <ul style="list-style-type: none"><li>The Chair expressed pride, joy, and gratitude on the achievement of seismic safety opening, and for the work the team continues to do. The Chair noted that there is still significant work to be done, e.g., finishing construction on the new bridge, dismantling of the old one, downsizing the program.</li><li>M. Dougherty and A. Boutros echoed the Chair's sentiments.</li><li>M. Dougherty indicated that he would like to take time in the future to recognize the individuals who worked on the bridge.</li></ul>	
2.	<b>CONSENT CALENDAR</b> <ul style="list-style-type: none"><li>a. TBPOC Conference Call/ Meeting Minutes<ul style="list-style-type: none"><li>1. TBPOC August 12, 2013 Minutes</li><li>2. TBPOC August 13, 2013 Minutes</li><li>3. TBPOC August 14, 2013 Minutes</li><li>4. TBPOC August 15, 2013 Minutes</li><li>5. TBPOC August 20, 2013 Minutes</li><li>6. TBPOC August 22, 2013 Minutes</li><li>7. TBPOC August 25, 2013 Minutes</li><li>8. TBPOC August 27, 2013 Minutes</li></ul></li></ul>	<ul style="list-style-type: none"><li>The TBPOC <b>APPROVED</b> the TBPOC Conference Call/Meeting Minutes, with a revision to Item 2a1: removal of the following 4a1 Action item on page 2—"The TBPOC <b>APPROVED</b> opening the New East Span before E2 retrofit is completed and after the shims are installed."—as discussed.</li></ul>

(Continued)

Items	Action
<p>9. TBPOC August 28, 2013 Minutes  10. TBPOC August 29, 2013 Minutes  11. TBPOC August 30, 2013 Minutes  12. TBPOC August 31, 2013 Minutes  13. TBPOC September 1, 2013 Minutes</p> <ul style="list-style-type: none"> <li>• The Chair pulled Item 2a1, referred to 4a1 Action item on page 2 as being inaccurate, and suggested its removal. M. Dougherty and A. Boutros concurred.</li> </ul> <p>b. Contract Change Orders (CCOs)</p> <ol style="list-style-type: none"> <li>1. SAS CCO 98-S0 (Tower Skirt Modifications), Not to Exceed \$3,500,000</li> <li>2. SAS CCO 289-S0 (Tower Fender and Footing Modifications), \$3,794,949.66</li> </ol> <ul style="list-style-type: none"> <li>• The Chair pulled Item b for discussion.</li> <li>○ In response to the Chair's query, D. Noel/B. Casey described the changes that gave rise to the CCOs, and requested TBPOC approval for CCO 98-S0 and CCO 289-S0 in the revised amounts of \$3,148,741 and not to exceed \$3,500,000, respectively.</li> </ul>	<ul style="list-style-type: none"> <li>• The TBPOC pulled Item b for discussion and <b>APPROVED</b> Item 2b1, SAS CCO 98-S0, and Itemb2b2, SAS CCO 289-S0, in the revised amounts of \$3,148,741 and not to exceed \$3,500,000, respectively, after discussion. The Chair dissented on Item 2b2.</li> </ul>
<p>2. <b>SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES</b></p> <p>a. E2 Update</p> <ol style="list-style-type: none"> <li>1. E2 Budget/Testing</li> <li>2. Anchor Rod Testing CCOs</li> </ol> <ul style="list-style-type: none"> <li>• T. Anziano reported on the progress of the E2 shear key work, and with B. Maroney described and summarized the information on the handout pertaining to the Anchor Rod Testing Program - SAS A354BD Bolt Tests, Stress Intensity Factors vs. HRC (Rockwell C Hardness), Test Setup for Stress Corrosion (Townsend) Test, Test Setup for Raymond Test (Increments Load Step), and Bolt/Metallurgy Specialists. TBPOC approval for the Anchor Rod Testing Program Budget</li> </ul>	<ul style="list-style-type: none"> <li>• The TBPOC <b>DID NOT APPROVE</b> the \$8,750,000</li> </ul>

(Continued)

Items	Action
<p>of \$8,750,000 was requested.</p> <ul style="list-style-type: none"> <li>○ B. Maroney indicated that the industry is excited about the Raymond testing we are doing, so much so that he has been invited to speak about it.</li> <li>○ It was noted that the name of the BATA specialist was missing from the comprehensive list of Bolt/Metallurgy Specialists.</li> <li>• TBPOC approval for additional funds for CCOs 314-S1 (\$450,000) and 314-S2 (2,550,000) was requested.</li> </ul> <p>b. CCO 160 Update</p> <ul style="list-style-type: none"> <li>• Discussed during TBPOC pre-meeting.</li> </ul> <p>c. Corridor Update/ Schedule</p> <ul style="list-style-type: none"> <li>• Discussion items included: impact of ABF exit, elevator acceleration.</li> </ul> <p>d. Demolition Update</p> <ul style="list-style-type: none"> <li>• T. Anziano indicated that the demolition of the old span has started.</li> <li>○ Discussion items included: contractor schedule, regulatory issues; Phase 2 permits; progress on cantilever upper deck; 504s/288s; bikers/gawkers, lead particles.</li> <li>○ B. Maroney referred to the handout distributed, gave a summary of the Advanced Planning Study: San Francisco-Oakland Bay Bridge Pier 3 Demonstration, and requested TBPOC support to take the study to the resource agencies and obtain permit(s) to proceed with the demonstration project that has the potential to save on the project costs and schedule.</li> </ul> <p>e. Bike Path and Parking Update</p> <ul style="list-style-type: none"> <li>• T. Anziano gave an update on the</li> </ul>	<p>budget authorization request for the Anchor Rod Testing Program.</p> <ul style="list-style-type: none"> <li>• Add the name of the BATA specialist to the list of Bolt/Metallurgy Specialists.</li> <li>• The TBPOC <b>APPROVED</b> CCOs 314-S1 and 314-S2 in the total amount of \$2,700,000.</li> </ul> <p>• The PMT to probe into the elevator acceleration.</p> <p>• Staff to arrange a TBPOC site visit on November 5.</p> <p>• Staff to develop scope, budget and schedule for the demonstration project and present to the TBPOC at their next meeting.</p>

***(Continued)***

Items	Action
<p>status of the bicycle/pedestrian path parking using various diagrams. He noted that a lot of time is being spent in monitoring and making adjustments to signs, operations, and parking.</p> <ul style="list-style-type: none"> <li>○ Discussion items included: impact of Port of Oakland's reconstruction of Burma Road, interim parking solution and cost sharing; CHP daily counts; bike share program, rental facility.</li> <li>1. OTD2 CCO 119 – Stage 3 Impacts and Mitigation, Not to Exceed \$4M</li> <li>• D. Noel requested TBPOC approval of OTD2 CCO 119, which compensates the contractor for staging impacts resulting from the temporary bike path construction (\$2M), and mitigates potential delays to the overall contract completion schedule (\$2M).</li> </ul>	<ul style="list-style-type: none"> <li>• Staff to provide the TBPOC with a bike path count.</li> <li>• The TBPOC <b>APPROVED</b> OTD2 CCO 119 in the not-to-exceed amount of \$4,000,000, as presented.</li> </ul>
<p><b>3. OTHER BUSINESS</b></p> <ul style="list-style-type: none"> <li>a. Original Bay Bridge Troll Update <ul style="list-style-type: none"> <li>• Not discussed.</li> </ul> </li> <li>• <u>Next TBPOC Meeting</u>: The TBPOC confirmed that the November 7 meeting has been moved to November 5, same time (10:00am – 1:00pm), same place (Oakland).</li> <li>○ The TBPOC requested that a conference call be scheduled before then, during the week of October 21.</li> </ul>	<ul style="list-style-type: none"> <li>• Staff to schedule a TBPOC conference call during the week of October 21.</li> </ul>

Adjourned: 12:04 PM

***(Continued)***

**TBPOC MEETING MINUTES**  
October 3, 2013, 10:00am – 1:00pm

**APPROVED BY:**

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**STEVE HEMINGER**, TBPOC Chair  
Executive Director, Bay Area Toll Authority

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Date

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**Andre Boutros**  
Executive Director, California Transportation Commission

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Date

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**MALCOLM DOUGHERTY**  
Director, California Department of Transportation

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Date

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** October 29, 2013

**FR:** Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

**RE:** Agenda No. - 2b1

Item- Consent Calendar – Contract Change Orders (CCOs)  
Yerba Buena Island Transition Structure (YBITS) 1 CCO 21-S3 –  
Additional Funds for Storm Water Pollution Prevention (SWPP)

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**Recommendation:**  
**APPROVAL**

**Cost:**

CCO 21-S0:	\$ 0.00	Issued August 22, 2010
CCO 21-S1:	\$2,550,060.00	Approved by TBPOC on October 7, 2010
CCO 21-S2:	\$1,500,000.00	Approved by TBPOC on June 6, 2012
CCO 21-S3:	\$ 500,000.00	Pending Approval

**Schedule Impacts:**  
NA

**Discussion:**

**CCO 21-S3 in the amount \$500,000.00** will provide additional funds to compensate the contractor for the extra amount of work required to keep the hillside slope, commonly referred to as the “goat slope”, from eroding. The water flow from the hillside slope drains directly into the San Francisco Bay. The additional funding will pay for a labor crew to place SWPPP measures such as fiber rolls on the slope, gravel bags around catch basin inlets, the constant use of a street sweeper to keep paved areas clean, and will prepare the site for the upcoming winter season prior to contract acceptance. The YBITS1 contract is scheduled for completion in December of 2013.

The original CCO 21-S0 incorporated Caltrans’ new statewide general permit issued by the State Water Resource Board. Due to the change in character of the work created by the new permit, CCO 21-S1 eliminated all SWPPP contract item work and provided for the work to be performed on a force account basis. CCO 21-S2 provided an additional \$1.5 million estimated to cover through August 2013. That estimate took into account transferring the SWPPP implementation responsibility to the YBITS2 contract by the fall of 2013. However, the field takeover of SWPPP work by the YBITS 2 contractor

## *Memorandum*

will not happen until January 1, 2014. In addition, since the YBITS 2 plans include substantial work on the slopes, it was determined not to install the permanent erosion control measures on the slopes during execution of the YBITS 1 contract extending the ongoing effort to implement the SWPPP measures for a longer time.

### Risk Management:

Risk 23.1 has been established to account for SWPPP costs expected to be incurred above and beyond the cost set aside for CCO #21 in the project's CCO log. The amount of \$0.5M to be expended in CCO 21-S3 is in the middle of the estimated range of \$0.4M-\$1.2M in the risk register.

### **Attachment(s):**

1. Draft CCO: 21-S3
2. Draft CCO Memo: 21-S3
3. Approved CCO & CCO Memo 21-S0, 21-S1 & 21-S2

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CCO 21	Suppl. No. 3	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID
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**To: M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

**Extra Work at Force Account:**

Provide additional funds for performing work as specified under Change Order No. 21, Supplement No. 2, Change Order No. 21, Supplement No. 1, and Change Order No. 21, Supplement No. 0, as determined by the Engineer.

Estimated Extra Work at Force Account = \$500,000.00

Estimated Cost: Increase ☒ Decrease ☐ \$500,000.00

By reason of this order the time of completion will be adjusted as follows: Deferred

**Submitted by**

Signature	Resident Engineer William Howe, Senior R.E.	Date
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**Approval Recommended by**

Signature	Region Construction Division Chief Tony Anziano	Date
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**Engineer Approval by**

Signature	Region Construction Division Chief Tony Anziano	Date
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We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

**NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.**

**Contractor Acceptance by**

Signature	(Print name and title)	Date
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**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 10/23/2013 Page 1 of 1

TO: Deanna Vilcheck, ACM /			FILE: E.A. 04 - 0120S4	
FROM: William Howe, Senior R.E.			CO-RTE-PM SF-80-12.7/13.2	
FED. NO. NO FED AID				
CCO#: 21	SUPPLEMENT#: 3	Category Code: CXSA	CONTINGENCY BALANCE (incl. this change) <b>\$16,910,256.99</b>	
COST: \$500,000.00 INCREASE <input checked="" type="checkbox"/> DECREASE <input type="checkbox"/>			HEADQUARTERS APPROVAL REQUIRED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED: \$0.00			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
CCO DESCRIPTION: additional funds - SWPP			PROJECT DESCRIPTION: YBITS-1 (Yerba Buena Island Transition Structures)	
Original Contract Time: <b>1390</b> Day(s)	Time Adj. This Change: <b>DEF</b> Day(s)	Previously Approved CCO Time Adjustments: <b>0</b> Day(s)	Percentage Time Adjusted: (including this change) <b>0</b> %	Total # of Unreconciled Deferred Time CCO(s): (including this change) <b>10</b>

**THIS CHANGE ORDER PROVIDES FOR:**

Additional funding for implementing Storm Water Pollution Prevention (SWPP) measures as specified under Change Order No. 21, Supplements No. 0, No. 1 and No. 2.

This project, the Yerba Buena Island Transition Structure (YBITS), provides for the construction of two bridges, which will connect eastbound and westbound traffic on the new east span of the San Francisco Oakland Bay Bridge (SFOBB) from the signature Self-Anchored Suspension Bridge to the existing Yerba Buena Island tunnel.

The original Change Order No. 21, Supplement No. 0, incorporated the Department's new National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance (Order No. 2009-009-DWQ), Construction General Permit (CGP) effective July 1, 2010. The new permit implements year-round soil stabilization and sediment control best management practices in place of current rainy season requirements, increases the reporting and monitoring requirements for storm water discharges and provides changes for existing storm water pollution prevention plans to be in compliance with the new CGP. Change Order No. 21, Supplement No. 1, was subsequently issued to eliminate the contract item work associated with SWPP and provide for all SWPP work to be performed on a force account basis. Change Order No. 21, Supplement No. 2, was later issued to provide an additional \$1,500,000.00 in force account funding. As the work has progressed over the last year and a half, it is apparent that the cost of the work will exceed the funding provided under Supplement Nos. 1 and 2. This change order will provide additional funding to cover the current estimated cost of the work through the anticipated end of the project in December, 2013. The additional funding will be provided as Extra Work at Force Account at an estimated additional cost of \$500,000.00, which shall be financed from the contract's contingency balance. A cost analysis is on file.

Any adjustment of contract time is deferred as the additional requirements may affect the controlling operation.

Maintenance concurrence is not required as the change does not affect any permanent roadway features.

<b>CONCURRED BY:</b>			<b>ESTIMATE OF COST</b>	
Construction Engineer: William Howe	Date		THIS REQUEST	TOTAL TO DATE
Bridge Engineer: Mehran Ardakanian	Date		ITEMS	\$0.00 (\$149,940.00)
Project Engineer: Bob Zandipour, Design	Date		FORCE ACCOUNT	\$500,000.00 \$4,700,000.00
Project Manager: Ken Terpstra	Date		AGREED PRICE	\$0.00 \$0.00
FHWA Rep.:	Date		ADJUSTMENT	\$0.00 \$0.00
Environmental:	Date		TOTAL	\$500,000.00 \$4,550,060.00
Other (specify):	Date		<b>FEDERAL PARTICIPATION</b>	
Other (specify):	Date		<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING	
District Prior Approval By:	Date		FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)	
HQ (Issue Approve) By:	Date		<input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS	
Resident Engineer's Signature:	Date		FEDERAL FUNDING SOURCE PERCENT   	

HISTORY  
COPY**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CCO: 21	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID
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To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

The Contractor shall reference and incorporate into the Contract the Department's new National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance (Order No. 2009-009-DWQ), Construction General Permit effective July 1, 2010.

The Department's permit references and incorporates by reference the current statewide general permit issued by the State Water Resources Control Board (SWRCB) titled "Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities" that regulates discharges of storm water and non-storm water from construction activities disturbing one or more acres of soil in a common plan of development. Copies of the statewide permit and its modifications are available for review from the SWRCB, Division of Water Quality, 1001 "I" Street, P.O. Box 100, Sacramento, California 95812-0100, Telephone fax: (916) 341-5463 and may also be obtained at:

[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/](http://www.waterboards.ca.gov/water_issues/programs/stormwater/)

Said document shall be considered a part of, and shall become, an integral part of the Special Provisions and Contract for this project.

The requirements of this permit shall supersede the Department's permit referenced under Section 10-1.02 "WATER POLLUTION CONTROL" of the Contract Special Provisions entitled: "Order No. 99-06-DWQ, NPDES No. CAS000003, National Pollutant Discharge Elimination System Permit, Storm Water Permit and Waste Discharge Requirements for the State of California, Department of Transportation Properties, Facilities, and Activities". The requirements of this new permit shall govern over all relevant aspects of the Contract.

This Contract shall comply to the requirements pertaining to Risk Level 2 as defined under the permit.

The Contract Special Provisions shall be revised as follows:

1) Replace Section 5-1.26 RELATIONS WITH CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD of the special provisions with Section 5-1.26 RELATIONS WITH CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD as shown on Pages No. 63 of this change order (Attachment 5).

2) Replace Section 10-1.04 WATER POLLUTION CONTROL of the special provisions with Section 10-1.04 WATER POLLUTION CONTROL as shown on Pages No. 3 through 20 of this change order (Attachment 1).

3) Replace Section 10-1.05 CONSTRUCTION SITE MANAGEMENT of the special provisions with Section 10-1.05 CONSTRUCTION SITE MANAGEMENT as shown on Pages No. 21 through 34 of this change order (Attachment 2).

The Storm Water Pollution Prevention Plan (SWPPP) and Construction Site Monitoring Program for this project will be revised based on a project risk level of 2. A qualified SWPPP developer who meets the qualification and certification requirements of Section VII of the new CGP will develop the SWPPP. The project water pollution control manager must meet the requirements for a qualified SWPPP developer. These requirements are summarized on Page No. 35 of this change order (Attachment 3).

Storm water site inspections shall be conducted on a weekly basis year-round. The water pollution control manager must complete rain event action plans before any likely precipitation event. Sampling and analyses of storm water discharge locations, run-on locations and receiving water locations must be collected and analyzed daily for turbidity and pH during qualifying rain events. A qualifying rain event is defined as any storm event that produces precipitation of 1/2 inch or more of rain.

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CCO: 21	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID
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The water pollution control manager must prepare rain event action plans, notice of discharge reports, numeric action level exceedance reports, numeric effluent limitation violation reports and storm water annual reports. Use forms included on Pages No. 36 through 62 of this change order (Attachment 4) for preparing Rain Event Action Plan, and Sampling Field Log Sheets, Storm Water Site Inspection Report, Quarterly Non-Storm Water Site Inspection Report.

Any additional costs resulting from this change order are deferred and shall be compensated under a supplement to this change order.

Consideration of a time adjustment will be deferred until completion of the work specified herein. Determination of a commensurate time extension will be made in accordance with Section 8-1.07, "Liquidated Damages", of the Standard Specifications and Section 10-1.22 "Progress Schedule (Critical Path Method)" of the Special Provisions.

Estimated Cost: Increase ☐ Decrease ☐ \$0.00

By reason of this order the time of completion will be adjusted as follows: Deferred

Submitted by

Signature <i>Rejesh Oberoi</i>	Resident Engineer Rejesh Oberoi, Senior R.E.	Date <i>9/23/10</i>
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Approval Recommended by

Signature <i>Deanna Vilcheck</i>	Area Construction Manager Deanna Vilcheck	Date <i>9/28/10</i>
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Engineer Approves by

Signature <i>Deanna Vilcheck</i>	Area Construction Manager Deanna Vilcheck	Date <i>9/28/10</i>
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We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Accepted by

Signature <i>Edmundo A. Puchi</i>	(Print name and title) <i>Edmundo A. Puchi Treasurer</i>	Date <i>9-28-2010</i>
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**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 8/12/2010 Page 1 of 2

**HISTORY  
COPY**

TO: Deanna Vilcheck, ACM /

FILE: E.A. 04 - 0120S4

CO-RTE-PM SF-80-12.7/13.2

FROM: Rajesh Oberoi, Senior R.E.

FED. NO. NO FED AID

CCO#: 21 SUPPLEMENT#: 0 Category Code: CXSA

CONTINGENCY BALANCE (Incl. this change) \$29,054,212.00

COST: \$0.00

INCREASE ☐ DECREASE ☐HEADQUARTERS APPROVAL REQUIRED? ☒ YES ☐ NO

SUPPLEMENTAL FUNDS PROVIDED: \$0.00

IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☒ YES ☐ NO**CCO DESCRIPTION:**

New Construction General permit

**PROJECT DESCRIPTION:**

YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	DEF Day(s)	0 Day(s)	0 %	0

**THIS CHANGE ORDER PROVIDES FOR:**

Incorporating the Department's new National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance (Order No. 2009-009-DWQ), Construction General Permit into the contract.

The new National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance (Order No. 2009-009-DWQ), Construction General Permit (CGP) was adopted by the State Water Resources Control Board on September 9, 2009, and is effective July 1, 2010. Existing projects that have a Storm Water Pollution Prevention Plan (SWPPP) and have filed a Notice of Construction (NOC) under the existing CGP (Order No. 99-08-DWQ) will be grand-fathered under the new CGP as Risk Level 1. However this project has been specifically designated as Risk Level 2 as agreed between the Department and the San Francisco Regional Water Quality Control Board.

This change order revises the CGP order number, implements year-round soil stabilization and sediment control best management practices in place of current rainy season requirements, increases the reporting and monitoring requirements for storm water discharges and provides changes for existing storm water pollution prevention plans to be in compliance with the new CGP. Several sections of the contract special provisions are modified to reflect these changes.

The new CGP does not contain a defined rainy season and therefore requires installation of soil stabilization and sediment control best management practices year-round. Soil stabilization and sediment controls must be installed on inactive areas of construction if the area is not scheduled to be re-disturbed for more than 14 days. The contractor will be compensated for additional mobilizations of crews and equipment necessary to install soil stabilization and sediment controls during the contract-specified non-rainy season. The contractor will also be compensated for any adjustments because of the need to apply soil stabilization and sediment controls on small areas versus the larger areas allowed when there was a rainy season definition and for providing a dedicated water pollution control manager.

In order to enact the new permit via change order in a timely manner, compensation for these additional costs resulting from this change is deferred and shall be compensated under a forthcoming supplement to this change order.

Adjustment of contract time is deferred as the change may affect the controlling operation.

Maintenance concurrence is not required as this change doesn't affect any permanent roadway features.

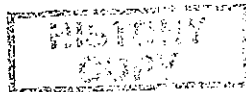
This change order was concurred by Sarah Picker of HQ Construction on September 20, 2010.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**CONTRACT CHANGE ORDER MEMORANDUM**

EA: 012054 CCO: 21 - 0

DATE: 8/12/2010 Page 2 of 2

<b>CONCURRED BY:</b>		<b>ESTIMATE OF COST</b>	
Construction Engineer: Rajesh Oberoi	Date 9/23/10	THIS REQUEST	TOTAL TO DATE
Bridge Engineer: Mehran Ardakanian	Date	ITEMS	\$0.00
Project Engineer:	Date	FORCE ACCOUNT	\$0.00
Project Manager:	Date	AGREED PRICE	\$0.00
FHWA Rep.:	Date	ADJUSTMENT	\$0.00
Environmental:	Date	TOTAL	\$0.00
Other (specify): SARAH PICKER	Date 9-20-10	<b>FEDERAL PARTICIPATION</b>	
Other (specify):	Date	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING	
District Prior Approval By:	Date	<b>FEDERAL SEGREGATION</b> (if more than one Funding Source or P.I.P. type)	
HQ (Issue/Approve) By: LARRY SALHANEY	Date 9-23-10	<input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS	
Resident Engineer's Signature:	Date	<b>FEDERAL FUNDING SOURCE</b> <b>PERCENT</b>	
Rajesh Oberoi	9/23/10		

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CCO: 21	Suppl. No. 1	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID
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To: M C M CONSTRUCTION INC

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Cost incurred by the Contractor pertaining to compliance to the following sections of the Contract Special Provisions, including the revisions incorporated under the original Change Order No. 21, shall be compensated on a force account basis in lieu of the contract bid item prices associated with this work:

Section 5-1.26 Relations with California Regional Water Quality Control Board  
 Section 10-1.04 Water Pollution Control  
 Section 10-1.05 Construction Site management  
 Section 10-1.06 Temporary Active Treatment System  
 Section 10-1.07 Sweeping  
 Section 10-1.08 Turbidity Control  
 Section 10-1.09 Temporary Hydraulic Mulch (Bonded Fiber Matrix) Section 10-1.10 Temporary Cover  
 Section 10-1.11 Temporary Concrete Washout  
 Section 10-1.12 Temporary Check Dam  
 Section 10-1.13 Temporary Silt Fence  
 Section 10-1.15 Temporary Gravel Bag Berm  
 Section 10-1.16 Temporary Construction Entrance  
 Section 10-1.17 Move In/Move Out (Temporary Erosion Control)  
 Section 10-1.18 Temporary Drainage Inlet Protection

**Estimate of Decrease in Contract Item at Contract Price:**

Item No. 8: CONSTRUCTION SITE MANAGEMENT				
-1 LS	(-100.00%)	\$15,000.00 /LS	=	-\$15,000.00 (-100.00%)
Item No. 10: PREPARE STORM WATER POLLUTION				
-1 LS	(-100.00%)	\$10,000.00 /LS	=	-\$10,000.00 (-100.00%)
Item No. 11: TEMPORARY SILT FENCE				
-410 M	(-100.00%)	\$11.00 /M	=	-\$4,510.00 (-100.00%)
Item No. 12: TEMPORARY GRAVEL BAG BERM				
-200 M	(-100.00%)	\$7.00 /M	=	-\$1,400.00 (-100.00%)
Item No. 13: TEMPORARY CONSTRUCTION ENTRANCE				
-5 EA	(-100.00%)	\$5,000.00 /EA	=	-\$25,000.00 (-100.00%)
Item No. 14: TEMPORARY COVER				
-1130 M2	(-100.00%)	\$6.00 /M2	=	-\$6,780.00 (-100.00%)
Item No. 15: TEMPORARY CHECK DAM				
-39 M	(-100.00%)	\$50.00 /M	=	-\$1,950.00 (-100.00%)
Item No. 16: MOVE-IN/MOVE-OUT				
-4 EA	(-100.00%)	\$750.00 /EA	=	-\$3,000.00 (-100.00%)
Item No. 17: TEMPORARY DRAINAGE INLET PROTECTION				
-13 EA	(-100.00%)	\$200.00 /EA	=	-\$2,600.00 (-100.00%)
Item No. 18: TEMPORARY HYDRAULIC MULCH				
-4500 M2	(-100.00%)	\$1.00 /M2	=	-\$4,500.00 (-100.00%)
Item No. 19: STREET SWEEPING				
-1 LS	(-100.00%)	\$25,000.00 /LS	=	-\$25,000.00 (-100.00%)
Item No. 20: TEMPORARY CONCRETE WASHOUT BIN				
-200 EA	(-100.00%)	\$1.00 /EA	=	-\$200.00 (-100.00%)

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CGO: 21	Suppl. No. 1	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID
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Item No. 21: TEMPORARY ACTIVE TREATMENT SYSTEM

-1 LS (-100.00%) \$50,000.00 /LS = -\$50,000.00 (-100.00%)

In accordance with Section 4-1.03B(3), "Eliminated Items," of the Standard Specifications, the adjustment due to the elimination of Contract Item No. 8 and Contract Item No. 10 through Contract Item No. 21 is Zero.

Estimated total cost for Decrease in Contract Item.....(\$149,940.00)

**Extra Work at Force Account:**

Perform all work necessary in order to comply with the Department's current statewide general permit issued by the State Water Resources Control Board (SWRCB) titled "Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities" as specified under the Special Provision sections listed under this change order, including the revisions incorporated under the original Change Order No. 21, and as determined by the Engineer.

Estimated cost of Extra Work at Force Account .....\$2,700,000.00

Consideration of a time adjustment will be deferred until completion of the work specified herein. Determination of a commensurate time extension will be made in accordance with Section 8-1.07, "Liquidated Damages", of the Standard Specifications and Section 10-1.22 "Progress Schedule (Critical Path Method)" of the Special Provisions.

Estimated Cost: Increase ☒ Decrease ☐ \$2,550,060.00

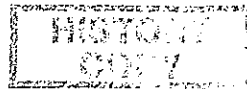
By reason of this order the time of completion will be adjusted as follows: Deferred

Signature <i>Rajesh Oberoi</i>	Resident Engineer Rajesh Oberoi, Senior R.E.	Date 10/6/10
Signature <i>Mike Forner</i>	Principal T.E. Mike Forner	Date 10/7/10
Signature <i>Mike Forner</i>	Principal T.E. Mike Forner	Date 10/14/10


We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Signature <i>Edmund R. Puski</i>	(Print name and title) Edmund R. Puski - Treasurer	Date 10-13-2010
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**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 9/15/2010 Page 1 of 2

TO: Deanna Vilcheck, ACM 			FILE: E.A. 04 - 0120S4	
FROM: Rajesh Oberoi, Senior R.E.			CO-RTE-PM SF-80-12.7/13.2	
FED. NO. NO FED AID				
CCO#: 21	SUPPLEMENT#: 1	Category Code: CXSA	CONTINGENCY BALANCE (incl. this change) \$26,204,152.00	
COST: \$2,550,060.00 INCREASE <input checked="" type="checkbox"/> DECREASE <input type="checkbox"/>			HEADQUARTERS APPROVAL REQUIRED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED: \$66,000.00			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
CCO DESCRIPTION: NEW CONSTRUCTION GENERAL PERMIT (CGP)			PROJECT DESCRIPTION: YBITS-1 (Yerba Buena Island Transition Structures)	
Original Contract Time: 1390 Day(s)	Time Adj. This Change: DEF Day(s)	Previously Approved CCO Time Adjustments: 0 Day(s)	Percentage Time Adjusted: (including this change) 0 %	Total # of Unreconciled Deferred Time CCO(s): (including this change) 4 2

**THIS CHANGE ORDER PROVIDES FOR:**

Water pollution control work to be performed in order to comply with the Department's new National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance.

This project, the Yerba Buena Island Transition Structure (YBITS), provides for the construction of two bridges which will connect eastbound and westbound traffic on the new east span of the San Francisco Oakland Bay Bridge (SFOBB) from the signature Self-Anchored Suspension Bridge to the existing Yerba Buena Island tunnel. The structures are comprised of concrete box girder bridges each approximately 40 meters high and 450 meters in length.

The original Change Order No. 21 incorporated the Department's new National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance (Order No. 2009-009-DWQ), Construction General Permit (CGP) effective July 1, 2010. The new permit implements year-round soil stabilization and sediment control best management practices in place of current rainy season requirements, increases the reporting and monitoring requirements for storm water discharges and provides changes for existing storm water pollution prevention plans to be in compliance with the new CGP. Several sections of the contract special provisions were modified under the original change order to reflect these changes.

The new CGP does not contain a defined rainy season and therefore requires installation of soil stabilization and sediment control best management practices year-round. Soil stabilization and sediment controls must be installed on inactive areas of construction if the area is not scheduled to be re-disturbed for more than 14 days. The contractor will need to be compensated for additional mobilizations of crews and equipment necessary to install soil stabilization and sediment controls during the contract-specified non-rainy season. The contractor will also need to be compensated for any adjustments because of the need to apply soil stabilization and sediment controls on small areas versus the larger areas allowed when there was a rainy season definition and for providing a dedicated water pollution control manager.

Compensation for these additional costs were deferred under the original change order.

This change order provides for all work pertaining to compliance with the new NPDES permit to be compensated on a force account basis. The existing contract items for the contractor's as-bid work pertaining to compliance with the old NPDES permit will be deleted. This adjustment of compensation shall be enacted due to the following conditions existing on this project:

1). This contract has been designated as a Risk Level 2 project, as defined under the new permit, which will require extensive pre-storm, active storm and post-storm reporting and testing to be performed. In addition to the already increased requirements for year round soil stabilization and sediment controls, these added measures will be difficult to segregate from the contractor's as-planned contract item operations. Maintenance costs associated with installed storm water pollution prevention (SWPP) measures is paid at 50% of the costs incurred in accordance with the special provisions further complicating the cost segregation. Compensating the work solely on a force account basis will eliminate compensation disputes and prevent double payment on work performed.

2). It is anticipated that additional SWPP measures will be ordered under this contract due to the high profile of the SFOBB east span corridor projects. Being the only active land (island) based contract on the corridor, having the higher risk level

**CONTRACT CHANGE ORDER MEMORANDUM**

EA: 0120S4 CCO: 21 - 1

DATE: 9/15/2010 Page 2 of 2

assignment and having a high risk slope directly adjacent to the San Francisco Bay, the engineer along with corridor SWPPP oversight staff have historically recommended an increased level of protection on Yerba Buena Island. These additional measures will need to be compensated separately from the as-bid work.

3). Field estimates based on the last 4 years on the Yerba Buena Island Detour Project, which occupied the same jobsite as this contract, indicate that the Engineer's estimate of contract item quantities for required SWPP measures is significantly underestimated. This will required an adjustment of these items, based on a force account basis, for the work in excess of 125% of the as-bid quantity of work resulting in the majority of the work being performed at the same force account basis being stipulated under this change order.

4). The Department will be mitigating risk to the opening of the new SFOBB east span by implementing additional SWPP measures and ensuring NPDES compliance. Were the contract found to be non-compliant to the Department's permit, the project could incur significant delay potentially affecting the planned opening of the new east span.

Due to the conditions outlined above, this change order will delete the contract bid item work and compensate all work on a force account basis. This will eliminate the need to adjust all 13 contract bid items and allow the Department to implement SWPP measures as determined necessary as the specific requirements of the new permit become clarified

The change order will eliminate 13 contract items at contract prices for a credit of \$149,940.00. All costs associated with implementing the project wide SWPP measures will be paid as extra work at force account at an estimated cost of \$2,700,000.00. The net change order cost of \$2,550,060.00 shall be financed from the contract's supplemental funds and the contract's contingency balance. Supplemental funding in the amount of \$66,000.00 were provided for additional water pollution and erosion control measures and for maintenance sharing costs. A cost analysis is on file.

This change has been approved by TBPOC on October 7th, 2010.

Any adjustment of contract time is deferred as the additional requirements may affect the controlling operation.

Maintenance concurrence is not required as the change doesn't affect any permanent roadway features.

<b>CONCURRED BY:</b>		<b>ESTIMATE OF COST</b>	
Construction Engineer: Rajesh Oberoi	Date 10/12/10	THIS REQUEST	TOTAL TO DATE
Bridge Engineer:	Date	ITEMS (\$149,940.00)	(\$149,940.00)
Project Engineer:	Date	FORCE ACCOUNT \$2,700,000.00	\$2,700,000.00
Project Manager:	Date	AGREED PRICE \$0.00	\$0.00
FHWA Rep.:	Date	ADJUSTMENT \$0.00	\$0.00
Environmental:	Date	TOTAL \$2,550,060.00	\$2,550,060.00
Other (specify):	Date	<b>FEDERAL PARTICIPATION</b>	
Other (specify): TBPOC	Date 10/7/10	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING	
District Prior Approval By:	Date	<b>FEDERAL SEGREGATION</b> (if more than one Funding Source or P.I.P. type)	
HQ (Issue Approve) By: LARRY SALHANEY	Date 10/11/10	<input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS	
Resident Engineer's Signature: Rajesh Oberoi	Date 10/12/10	<b>FEDERAL FUNDING SOURCE</b> <b>PERCENT</b>   	

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CCO 21	Suppl. No. 2	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID
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To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

**Extra Work at Force Account:**

Provide additional funds for performing all work necessary in order to comply with the Department's current Statewide General Permit issued by the State Water Resources Control Board (SWRCB) titled "Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities", as specified under the Special Provision sections listed under Change Order No. 21, Supplement No. 1, including the revisions incorporated under the original Change Order No. 21, Supplement No. 0, and as determined by the Engineer.

Estimated Cost of Extra Work at Force Account = \$1,500,000.00

Consideration of a time adjustment will be deferred until completion of the work specified herein. Determination of a commensurate time extension will be made in accordance with Section 8-1.07, "Liquidated Damages", of the Standard Specifications.

Estimated Cost: Increase ☒ Decrease ☐ \$1,500,000.00

By reason of this order the time of completion will be adjusted as follows: Deferred

Submitted by

Signature <i>William Howe</i>	Resident Engineer William Howe, Senior R.E.	Date 05-08-12
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Approval Recommended by

Signature <i>Michael Fomer</i>	Principal T.E. Mike Fomer	Date 5/8/12
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Engineer Approval by

Signature <i>Michael Fomer</i>	Principal T.E. Mike Fomer	Date 6/14/12
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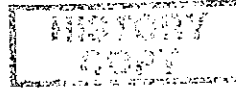
We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

**NOTE:** If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature <i>[Signature]</i>	Print name and title Edmund A. Puchi, Treasurer	Date 6-12-2012
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RECEIVED JUN 13 2012

**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 5/8/2012 Page 1 of 2

TO: Deanna Vilcheck, ACM / 

FILE: E.A. 04 - 0120S4

FROM: William Howe, Senior R.E.

CO-RTE-PM SF-80-12.7/13.2

FED. NO. NO FED AID

CCO#: 21 SUPPLEMENT#: 2 Category Code: CXSA

CONTINGENCY BALANCE (incl. this change) **\$68,635,316.00**COST: **\$1,500,000.00** INCREASE ☒ DECREASE ☐HEADQUARTERS APPROVAL REQUIRED? ☒ YES ☐ NOSUPPLEMENTAL FUNDS PROVIDED: **\$0.00**IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☒ YES ☐ NO**CCO DESCRIPTION:**

Additional SWPP Funding

**PROJECT DESCRIPTION:**

YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
<b>1390</b> Day(s)	<b>DEF</b> Day(s)	<b>0</b> Day(s)	<b>0</b> %	<b>9</b>

**THIS CHANGE ORDER PROVIDES FOR:**

Additional funding for implementing Storm Water Pollution Prevention (SWPP) measures as specified under Contract Change Order No. 21, Supplements No. 0 and No. 1.

This project, the Yerba Buena Island Transition Structure (YBITS), provides for the construction of two bridges which will connect eastbound and westbound traffic on the new east span of the San Francisco Oakland Bay Bridge (SFOBB) from the signature Self-Anchored Suspension Bridge to the existing Yerba Buena Island tunnel. The structures are comprised of concrete box girder bridges each approximately 40 meters high and 450 meters in length.

The original Contract Change Order No. 21, Supplement No. 0, incorporated the Department's new National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance (Order No. 2009-009-DWQ), Construction General Permit (CGP) effective July 1, 2010. The new permit implements year-round soil stabilization and sediment control best management practices in place of current rainy season requirements, increases the reporting and monitoring requirements for storm water discharges and provides changes for existing storm water pollution prevention plans to be in compliance with the new CGP. Several sections of the Contract Special Provisions were modified under the original change order to reflect these changes.

Change Order No. 21, Supplement No. 1, was subsequently issued to eliminate the contract item work associated with SWPP and provide for all SWPP work to be performed on a force account basis. As the work has progressed over the last year and a half, it has become apparent that the cost of the work will exceed the funding provided under Supplement No. 1. This change order will provide additional funding to cover the current estimated cost of the work through the anticipated end of the project in the Summer of 2013. Extensive costs have been incurred in properly controlling the storm water flows from the hills in the east and the west of the project limits. This storm water flows towards the center of the project and then drains to drainage inlets that drain directly to the San Francisco Bay.

The additional funding will be provided as extra work at force account at an estimated additional cost of \$1,500,000.00, which shall be financed from the Contract's contingency balance. A cost analysis is on file.

This change was approved by the TBPOC on June 6, 2012, copy attached.

Any adjustment of contract time is deferred as the additional requirements may affect the controlling operation.

Maintenance concurrence is not required as the change doesn't affect any permanent roadway features.

**CONTRACT CHANGE ORDER MEMORANDUM**

EA: 0120S4 CCO: 21 - 2

DATE: 5/8/2012

Page 2 of 2

<b>CONCURRED BY:</b>			<b>ESTIMATE OF COST</b>		
Construction Engineer: William Howe	Date	05-08-12	ITEMS	THIS REQUEST	TOTAL TO DATE
Bridge Engineer: Mehran Ardakanian	Date		FORCE ACCOUNT	\$1,500,000.00	(\$149,940.00)
Project Engineer: Bob Zandipour, Design	Date	5-9-12	AGREED PRICE	\$0.00	\$0.00
Project Manager: Ken Terpstra	Date	6-8-12	ADJUSTMENT	\$0.00	\$0.00
FHWA Rep.:	Date		TOTAL	\$1,500,000.00	\$4,050,060.00
Environmental:	Date		<b>FEDERAL PARTICIPATION</b>		
Other (specify):	Date		<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING		
Other (specify):	Date		FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)		
District Prior Approval By:	Date		<input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS		
HQ (Issue Approve) By: <i>Larry Salhancy</i>	Date	6-7-12	FEDERAL FUNDING SOURCE    PERCENT		
Resident Engineer's Signature:	Date				
<i>William Howe</i>		05-08-12			

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** October 29, 2013

**FR:** Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

**RE:** Agenda No. - 2b2  
Item- Consent Calendar – Contract Change Orders (CCOs)  
Oakland Touchdown 2 (OTD2) CCO 127-S0 – Stage 3 Hazardous Soil Disposal

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**Recommendation:**  
**APPROVAL**

**Cost:**  
Not to Exceed \$3,000,000.00

**Schedule Impacts:**  
NA

**Discussion:**  
**CCO 127-S0 in the not-to-exceed amount of \$3,000,000.00** will provide for the disposal of excavated soil that has been classified as California hazardous.

Stage 3 provides for the excavation of the southern shoulder of the EB mainline, the adjacent bike path and several maintenance access roads. Approximately 12,000 cubic meters (M3) of soil will be excavated within Stage 3. The plans identify less than 10% of this excavation to be California hazardous which requires disposal at approved facilities. Based on testing of the Stage 3 soil excavated to-date it is now anticipated that more than 50% of the excavation will be classified as California hazardous. CCO 127-S0 will compensate the contractor for the additional cost to dispose of the hazardous soil which was identified as non-hazardous in the contract plans.

The California hazardous material is anticipated to be disposed of at an approved facility at an additional cost of over \$400.00 per M3. In the event the material can be disposed of within the state right of way the cost may be considerably lower. However, to-date no state right-of-way has been identified for disposal.

## *Memorandum*

CCO 50-S0, 50-S1 and 50-S2 were executed for a total cost of \$928,013.00 to address increased levels of contaminants found in the excavated soil during Stage 1. CCO 125-S0 is being processed for an estimated cost of \$230,000.00 to pay for handling the soil contamination found during Stage 2 (Labor Day Weekend). This CCO 127-S0 will cover the cost of Stage 3 contaminated soil processing. No supplemental funding was provided under the contract for this work.

### Risk Management:

The risk register is carrying Risk Id 1010 "Removal of Hazardous Materials" in the range of \$2M to \$5M (50% Probable = \$3.5M) to address the difference in removal costs should the material be classified more hazardous than shown on the plans. The cost of this change is within the range contemplated.

### **Attachment(s):**

CCO No. 127-S0 and CCO No. 127-S0 Memorandum

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

<b>CCO 127</b>	<b>Suppl. No. 0</b>	<b>Contract No. 04 - 0120M4</b>	<b>Road 04-ALA-80-1.6/2.7</b>	<b>FED. AID LOC.: NO FED AID</b>
----------------	---------------------	---------------------------------	-------------------------------	----------------------------------

**To: FLATIRON WEST INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

**Adjustment of Compensation at Unit Price:**

Compensate the Contractor for all additional cost to handle, transport and dispose of excavated soil from Stage 3 construction that was identified under the Contract as Bid Item No. 65 Roadway Excavation that has now been reclassified as Type H soil. Upon approval by the Engineer, the Type H soil will be transported and disposed of at an approved facility.

For all additional costs incurred due to the reclassification of Bid Item No. 65 Stage 3 soil as Type H soil, the Contractor shall be compensated an agreed unit price of \$xxx.xx per cubic meter of soil disposed of.

Estimated cost of Adjustment of Compensation at Agreed Unit Price .....(NOT TO EXCEED)\$3,000,000.00

Estimated Cost: Increase ☒ Decrease ☐ **\$3,000,000.00**

By reason of this order the time of completion will be adjusted as follows: 0 days

**Submitted by**

Signature	Resident Engineer JEANNIE BALDERRAMOS	Date
-----------	--	------

**Approval Recommended by**

Signature	Region Construction Division Chief TONY ANZIANO	Date
-----------	--	------

**Engineer Approval by**

Signature	Region Construction Division Chief TONY ANZIANO	Date
-----------	--	------

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

**NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.**

**Contractor Acceptance by**

Signature	(Print name and title)	Date
-----------	------------------------	------

**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 10/29/2013 Page 1 of 1

TO: DEANNA VILCHECK / JEANNIE BALDERRAMOS			FILE: <b>E.A.</b> 04 - 0120M4	
FROM: JEANNIE BALDERRAMOS			<b>CO-RTE-PM</b> 04-ALA-80-1.6/2.7	
			<b>FED. NO.</b> NO FED AID	
CCO#: <b>127</b>	SUPPLEMENT#: <b>0</b>	Category Code: <b>AAZZ</b>	CONTINGENCY BALANCE (incl. this change) <b>\$3,179,650.09</b>	
COST: <b>\$3,000,000.00</b> INCREASE <input checked="" type="checkbox"/> DECREASE <input type="checkbox"/>			HEADQUARTERS APPROVAL REQUIRED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED: <b>\$0.00</b>			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
<b>CCO DESCRIPTION:</b> Adnl. cost to dispose stage3 type H soil			<b>PROJECT DESCRIPTION:</b> CONSTRUCT BRIDGES AND ROADWAY, AND ELECTRICAL SYSTEM	
Original Contract Time: <b>1140</b> Day(s)	Time Adj. This Change: <b>0</b> Day(s)	Previously Approved CCO Time Adjustments: <b>0</b> Day(s)	Percentage Time Adjusted: (including this change) <b>0</b> %	Total # of Unreconciled Deferred Time CCO(s): (including this change) <b>0</b>

**THIS CHANGE ORDER PROVIDES FOR:**

Compensating the contractor for the additional cost to handle, transport and dispose of excavated soil from Stage 3 construction that has been reclassified as Type H soil.

This contract, the Oakland Touchdown 2 (OTD2) provides for the construction of the last remaining concrete box girder frame of the Oakland Touchdown structure and the construction of the remaining eastern roadway approach as part of the new east span of the San Francisco Oakland Bay Bridge (SFOBB).

Stage 3 provides for the excavation of the southern shoulder of the EB mainline, the adjacent bike path and several maintenance access roads. Approximately 12,000 cubic meters (M3) of soil will be excavated within Stage 3. The plans identify less than 10% of this excavation to be California hazardous which requires disposal at approved facilities. Based on testing of the Stage 3 soil excavated to date more than 50% of the excavation will be classified as California hazardous. This will result in approximately 5,000 M3 of soil having to be disposed of at an approved facility in lieu of being disposed on at an unregulated facility or construction site. This change order will compensate the contractor for the additional cost to handle, transport and dispose of the hazardous soil which was identified as non-hazardous in the contract plans.

Compensation shall be paid as an adjustment of compensation at an agreed unit price \$xxx.xx per cubic meter at an estimated cost NOT TO EXCEED \$3,000,000.00. The cost shall be funded by the contingency funds allotted to the contract. A cost analysis is on file.

Maintenance concurrence is not required as the change doesn't affect any permanent roadway features.

No adjustment of contract time is warranted as the change will not affect the controlling operation.

Maintenance concurrence is not required since this work does not affect the permanent structure.

<b>CONCURRED BY:</b>			<b>ESTIMATE OF COST</b>		
Construction Engineer: JEANNIE BALDERRAMOS	Date		THIS REQUEST		TOTAL TO DATE
Bridge Engineer:	Date		ITEMS	\$0.00	\$0.00
Project Engineer: GABRIEL T CRUZ	Date		FORCE ACCOUNT	\$0.00	\$0.00
Project Manager: KEN TERPSTRA	Date		AGREED PRICE	\$0.00	\$0.00
FHWA Rep.:	Date		ADJUSTMENT	\$3,000,000.00	\$3,000,000.00
Environmental: DRAGOMIR BOGDANIC	Date		<b>TOTAL</b>	<b>\$3,000,000.00</b>	<b>\$3,000,000.00</b>
Other (specify): JAIME GUTIERREZ SR DGN ENG	Date		<b>FEDERAL PARTICIPATION</b>		
Other (specify):	Date		<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING		
District Prior Approval By:	Date		FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)		
HQ (Issue Approve) By: LARRY SALHANEY	Date		<input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS		
Resident Engineer's Signature:	Date		FEDERAL FUNDING SOURCE    PERCENT _____ _____ _____		

## Memorandum

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** October 29, 2013

**FR:** Rich Foley, Assistant Risk Manager, Toll Bridge Program, CT

**RE:** Agenda No. - 3a

Item- Progress Reports

2013 Third Quarter Risk Management - Yerba Buena Island Transition Structures #2 (YBITS2) Breakdown

**Recommendation:**

For Information Only

**Discussion:**

Summary of Changes to the Risk Management forecast are summarized as follows:

YBITS 2 Risks			Current(\$)	Previous (\$)	Change (\$)
CCO	1001	MEP Systems *	\$5,250,000		\$5,250,000
Risk	24	Delay in Construction (TRO+) **	\$9,667,000	\$6,000,000	\$3,667,000
Risk	50	Coordination of YBITS #2 contract with other contracts on YBI ***	\$2,700,000		\$2,700,000
Risk	6	Complex submittals require longer than expected review time ****	\$1,125,000	\$875,000	\$250,000
CCO	1000	Miscellaneous admin/technical CCOs (excluding Cantilever Demo)	\$2,433,000	\$2,567,000	(\$134,000)
Risk	49	Access to new eastbound bridge on YBI	\$135,000	\$270,000	(\$135,000)
Risk	920	Delay impact by potential delay to SSO	\$0	\$300,000	(\$300,000)
				Total Change	\$11,298,000

\* Risk Transferred from the YBITS1 Contract - Part of a \$34.2M allocation approved by TBPOC for MEP systems. Work will now be performed by YBITS2 Contractor.

\*\* Change from Schedule Risk Analysis (Expected delays increased approx. 3 mo.)

\*\*\* Risk Transferred from the Program Risk Register.

\*\*\*\* Probability of Risk Occurring increased.

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** October 29, 2013

**FR:** Tony Anziano – Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 3b  
Progress Reports  
Item- Capital Outlay Support (COS) Update

---

**Recommendation:**

For Information Only

**Cost:**

NA

**Schedule Impacts:**

NA

**Discussion:**

A verbal capital outlay support (COS) update will be provided at the TBPOC meeting on November 5, 2013.

**Attachment(s):** NA

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** October 29, 2013

**FR:** Andrew Fremier, Deputy Executive Director, Operations, MTC/BATA

**RE:** Agenda No. - 3c  
Progress Reports  
Item- 2013 Third Quarter Project Progress and Financial Update

---

**Recommendation:**

**APPROVAL**

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

Included in this package, for TBPOC approval, is the 2013 Third Quarter Project Progress and Financial Update. The report has yet to include cost and forecast figures.

**Attachment(s):**

2013 Third Quarter Project Progress and Financial Update (see front of binder)



# San Francisco Bay Area Toll Bridge Seismic Retrofit and Regional Measure 1 Programs

**Draft Version 2.0**  
**2013 Third Quarter**  
**Project Progress**  
**and Financial Update**



**TOLL BRIDGE PROGRAM  
OVERSIGHT COMMITTEE**

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

**Released: November 2013**



The San Francisco-Oakland Bay Bridge Self-Anchored Suspension Span and Skyway after Opening





Toll Bridge Program Oversight Committee  
Department of Transportation  
Office of the Director  
1120 N Street  
P.O. Box 942873  
Sacramento, CA 94273-0001

August 15, 2013

Mr. Gregory Schmidt  
Secretary of the Senate  
State Capitol, Room 3044  
Sacramento, CA 95814

Mr. E. Dotson Wilson  
Chief Clerk of the Assembly  
State Capitol, Room 3196  
Sacramento, CA 95814

Dear Messrs. Schmidt and Wilson:

The Toll Bridge Program Oversight Committee (TBPOC) is pleased to submit the 2013 Second Quarter Project Progress and Financial Update for the San Francisco Bay Area Toll Bridge Seismic Retrofit and National Measure 1 Programs (TBSRP and RM1), prepared pursuant to California Streets and Highways Code Section 30912.

The TBPOC is tasked to perform project oversight and control over the TBSRP and comprises the Director of the California Department of Transportation (Caltrans), the Executive Director of the Bay Area Toll Authority (BATA), and the Executive Director of the California Transportation Commission (CTC). This second quarter report includes project progress and activities for the TBSRP through June 30, 2013, with more recent progress and activities addressed in this letter.

Recently, much focus has been placed on the failed anchor rods on the new self-anchored suspension (SAS) span of the San Francisco Oakland Bay Bridge. On July 8, 2013, the TBPOC released our investigative report that laid out length the chronology of events and assigned proper responsibility as warranted for the rod failures. The report made the following determinations:

- The rods failed due to near-term hydrogen embrittlement. The failed rods were fabricated in 2008, separate from other similar rods used on the project. The 2008 rods exhibited a material susceptible to hydrogen embrittlement with a heterogeneous structure and high surface hardness.
- It is safe to open the new East Span after replacing the clamping capacity lost by the failed 2008 rods with a steel saddle retrofit. The retrofit is currently being fabricated with completion forecast for early December 2013.
- Caltrans has performed an extensive review of the remaining rods of similar type to the failed rods on the bridge and has determined the risk of failure by near-term hydrogen embrittlement has passed for these rods. However, there is a potential for longer-term (years and decades) stress corrosion cracking on certain rods. This potential risk can be managed safely and effectively after the bridge is placed into service.

Because of the superior strength of the new East Span design compared to the old East Span, the Toll Bridge Seismic Safety Peer Review Panel (TBSSPRP) supported a proposal for an interim fix at Pier E2 that could be installed prior to completion of the steel saddle retrofit. The TBPOC asked the Federal Highway Administration (FHWA) and two preeminent bridge engineers

from the firms of Buckland & Taylor, Ltd., and Modjeski and Masters to review this recommendation. All reviews have reached the same unequivocal conclusion that the interim retrofit will adequately protect and allow for the opening of the new East Span while the permanent retrofit is under construction.

As a result, on August 15th, the TBPOC met in public session to approve the five-day closure over the Labor Day weekend from the evening of August 28, 2013 through the morning of September 3, 2013 to move traffic onto the new East Span.

The program contingency is currently \$329 million in accordance with the TBPOC approved budget. As of the end of the third quarter of 2013, the 50 percent probable draw on program contingency is \$159 million. The potential draw ranges from about \$75 million to \$250 million (refer to Figure 1).

The current program contingency balance is sufficient to cover the cost of currently identified risks. In accordance with the approved TBSRP risk management plan, risk mitigation actions are continuously developed and implemented to reduce the potential draw on the program contingency.

The TBPOC is committed to providing the Legislature with comprehensive and timely reporting on the TBSRP. If there are any questions, or if any additional information is required, please do not hesitate to contact the members of the TBPOC.

Sincerely,

STEVE HEMINGER  
TBPOC Chair  
Executive Director  
Bay Area Toll Authority

ANDRE BOUTROS  
TBPOC Vice-Chair  
Executive Director  
California Transportation Commission

MALCOLM DOUGHERTY  
Director  
California Department of Transportation



Toll Bridge Program Oversight Committee  
Department of Transportation  
Office of the Director  
1120 N Street  
P.O. Box 942873  
Sacramento, CA 94273-0001

August 15, 2013

Mr. Joseph Tavaglione, Chair  
California Transportation Commission  
1120 N Street, Room 2221  
Sacramento, CA 95814

Mr. James C. Ghielmetti, Vice-Chair  
California Transportation Commission  
1120 N Street, Room 2221  
Sacramento, CA 95814

Dear Messrs. Tavaglione and Ghielmetti:

The Toll Bridge Program Oversight Committee (TBPOC) is pleased to submit the 2013 Second Quarter Project Progress and Financial Update for the San Francisco Bay Area Toll Bridge Seismic Retrofit and Regional Measure 1 Programs (TBSRP and RM1), prepared pursuant to California Streets and Highways Code Section 20952.

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- It is safe to open the new East Span after replacing the clamping capacity lost by the failed 2008 rods with a steel saddle retrofit. The retrofit is currently being fabricated with completion forecast for early December 2013.
- Caltrans has performed an extensive review of the remaining rods of similar type to the failed rods on the bridge and has determined that risk of failure by near-term hydrogen embrittlement has passed for these rods. However, there is a potential for long-term (years and decades) stress corrosion cracking on certain rods. This potential risk can be managed safely and effectively after the bridge is placed into service.

Because of the superior strength of the new East Span design compared to the old East Span, the Toll Bridge Seismic Safety Peer Review Panel (TBSSPRP) supported a proposal for an interim fix at Pier E2 that could be installed prior to completion of the steel saddle retrofit. The TBPOC asked the Federal Highway Administration (FHWA) and two preeminent bridge engineers

from the firms of Buckland & Taylor, Ltd., and Modjeski and Masters to review this recommendation. All reviews have reached the same unequivocal conclusion that the interim retrofit will adequately protect and allow for the opening of the new East Span while the permanent retrofit is under construction.

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Sincerely,

STEVE HEMINGER  
TBPOC Chair  
Executive Director  
Bay Area Toll Authority

ANDRE BOUTROS  
TBPOC Vice-Chair  
Executive Director  
California Transportation Commission

MALCOLM DOUGHERTY  
Director  
California Department of Transportation



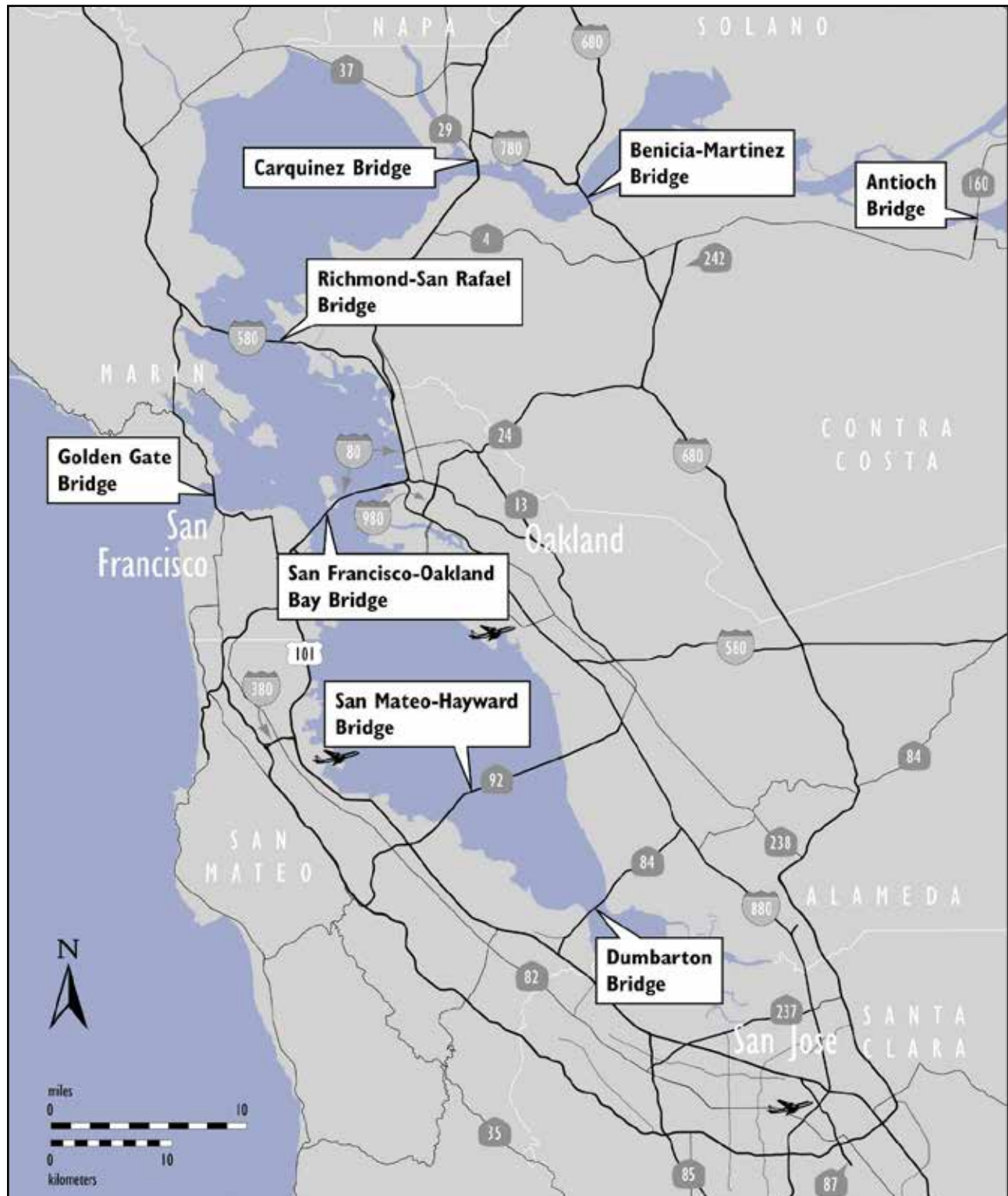
The Old San Francisco-Oakland Bay Bridge Upper Deck  
Awaiting Demolition

The San Francisco-Oakland Bay Bridge Self-Anchored Suspension Span  
Suspender Rope Separator Installation

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## Map of Bay Area Toll Bridges



\* The Golden Gate Bridge is owned and operated by the Golden Gate Bridge, Highway and Transportation District.

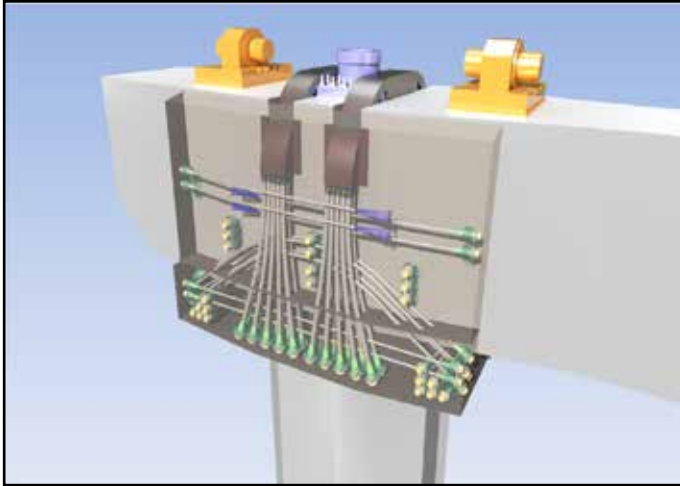
## Introduction

In July 2005, Assembly Bill (AB) 144 (Hancock) created the Toll Bridge Program Oversight Committee (TBPOC) to implement a project oversight and project control process for the new Benicia-Martinez Bridge and State Toll Bridge Seismic Retrofit Program (TBSRP) projects. The TBPOC consists of the Director of the California Department of Transportation (Caltrans), the Executive Director of the Bay Area Toll Authority (BATA) and the Executive Director of the California Transportation Commission (CTC). The TBPOC's project oversight and control processes include, but are not limited to, reviewing bid specifications and documents, reviewing and approving significant change orders and claims in excess of \$1 million (as defined by the Committee), and keeping the Legislature and others apprised of current project progress and status. In January 2010, Assembly Bill (AB) 1175 (Torlakson) amended the TBSRP to include the Antioch and Dumbarton Bridges seismic retrofit projects. The current TBSRP is as follows:

Toll Bridge Seismic Retrofit Projects	Seismic Safety Status
Dumbarton Bridge Seismic Retrofit	Complete
Antioch Bridge Seismic Retrofit	Complete
San Francisco-Oakland Bay Bridge East Span Replacement	Construction
San Francisco-Oakland Bay Bridge West Approach Replacement	Complete
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit	Complete
San Mateo-Hayward Bridge Seismic Retrofit	Complete
Richmond-San Rafael Bridge Seismic Retrofit	Complete
1958 Carquinez Bridge Seismic Retrofit	Complete
1962 Benicia-Martinez Bridge Seismic Retrofit	Complete
San Diego-Coronado Bridge Seismic Retrofit	Complete
Vincent Thomas Bridge Seismic Retrofit	Complete

The New Benicia-Martinez Bridge is part of a larger program of toll-funded projects called the Regional Measure 1 (RM1) Toll Bridge Program under the responsibility of BATA and Caltrans. While the rest of the projects in the RM1 program are not directly under the responsibility of the TBPOC, BATA and Caltrans will continue to report on their progress as an informational item. The RM1 program includes:

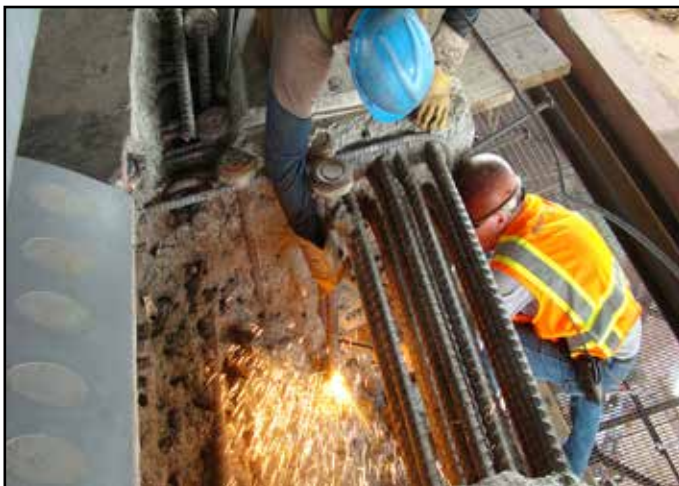
Regional Measure 1 Projects	Open to Traffic Status
Interstate 880/State Route 92 Interchange Reconstruction	Open
1962 Benicia-Martinez Bridge Reconstruction	Open
New Benicia-Martinez Bridge	Open
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Open
Richmond-San Rafael Bridge Trestle, Fender & Deck Joint Rehabilitation	Open
Westbound Carquinez Bridge Replacement	Open
San Mateo-Hayward Bridge Widening	Open
State Route 84 Bayfront Expressway Widening	Open
Richmond Parkway	Open



Rendering of E2 Saddle Retrofit Strategy



Cross Section of an E2 Shear Key Broken Bolt



Cutting Rebar on the upper Saddle

## The San Francisco-Oakland Bay Bridge Bolt Issues

Within days after tensioning was performed, the anchor bolts in the shear keys directly below the eastbound and westbound Orthotropic Box Girder (OBG) structures (known as shear keys S1 and S2) began to fail. A total of 32 out of the 96 anchor bolts broke before Caltrans directed the contractor to reduce the anchor bolt tension to prevent further failures.

A forensic metallurgic examination was jointly performed with both the contractor's and Caltrans' Materials Engineering and Testing Services' (METS) metallurgical experts. It was determined that while the failed bolts' material properties did meet the contract specifications, the hardness properties were at the upper limit and the ductility and toughness properties were at the lower limit. Taking this high-end hardness and low-end ductility into account and combining it with a high tensile stress (0.70 Fu) makes this material more susceptible to the effects of hydrogen cracking (also known as hydrogen embrittlement). The metallurgical examination indicated that the bolts were susceptible to hydrogen embrittlement due to a lack of uniformity in the microstructure of the rods.

The anchor bolts at shear keys S1 and S2 are uniquely different from the anchor bolts at the remaining shear keys and bearings (known as shear keys S3 and S4 and bearings B1, B2, B3, and B4) in that they were manufactured in 2008 as opposed to the remaining ones in 2010. In addition, due to physical limitations, the anchor bolts at shear keys S1 and S2 have their anchors fully cast into the pier E2 cap and are not replaceable, as opposed to the remaining shear keys and bearings which are through bolted and thus replaceable. As such, shear keys S1 and S2 will require an alternate anchorage solution.

On July 8, 2013, the TBPOC released its investigative report that laid out the chronology of events and assigned proper responsibility as warranted for the rod failures. The report made the following determinations:

- The rods failed due to near-term hydrogen embrittlement. The failed rods were fabricated in 2008, separate from other similar rods used on the project. The 2008 rods exhibited a material susceptible to hydrogen embrittlement with a heterogeneous structure and high surface hardness.

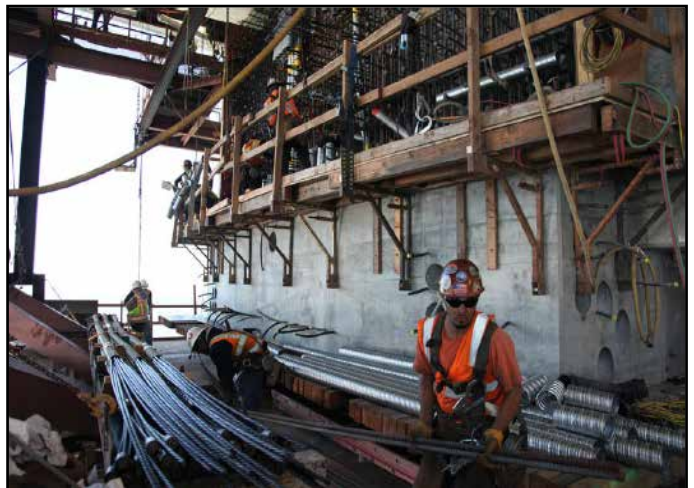
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Because of the superior strength of the new East Span design compared to the old East Span, the Toll Bridge Seismic Safety Peer Review Panel (TBSSRP) supported a proposal for an interim fix at Pier E2 that could be installed prior to completion of the steel saddle retrofit. The TBPOC asked the Federal Highway Administration (FHWA) and two preeminent bridge engineers from the firms of Buckland & Taylor, Ltd., and Modjeski and Masters to review this recommendation. All reviews have reached the same unequivocal conclusion that the interim retrofit will adequately protect and allow for the opening of the new East Span while the permanent retrofit is under construction.

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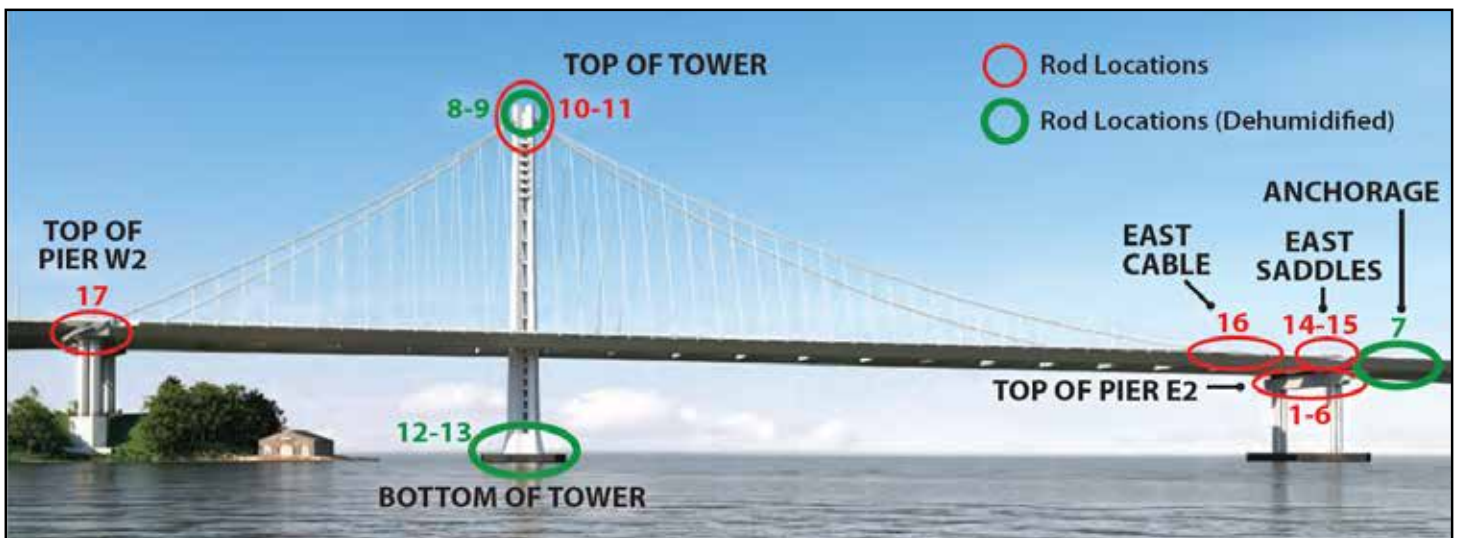


Detensioning E2E Shear Key Bolts



Rebar Installation at the west Face of E2 Cap Beam

## A354 Grade BD Rod Locations on the SAS Bridge



## SUMMARY OF MAJOR PROJECT HIGHLIGHTS, ISSUES, AND ACTIONS



Self-Anchored Suspension Bridge Lower Saddle Installation at E2 Shear Key Anchorage



Deck Removal in Progress on the Old San Francisco-Oakland Bay Bridge



Oakland Touchdown #2 Permanent Bike Path Progress Looking west

### Toll Bridge Seismic Retrofit Program Risk Management

A major element of the 2005 AB 144, the law creating the TBPOC, was legislative direction to implement a more aggressive risk management program. Such a program has been implemented in stages over time to ensure development of a robust and comprehensive approach to risk management. A comprehensive risk assessment is performed for each project in the program on a quarterly basis.

Based upon those assessments, a forecast is developed using the average cost of risk. These forecasts can both increase and decrease as risks are identified, resolved or retired. The program contingency is currently \$329 million in accordance with the TBPOC approved budget. As of the end of the second quarter of 2013, the 50 percent probable draw on program contingency is \$159 million. The potential draw ranges from about \$75 million to \$250 million (refer to Risk Management on page 34).

The current program contingency balance is sufficient to cover the cost of currently identified risks. In accordance with the approved TBSRP Risk Management Plan, risk mitigation actions are continuously being developed and implemented to reduce the potential draw on the program contingency.

### San Francisco-Oakland Bay Bridge (SFOBB) East Span Seismic Replacement Project Self-Anchored Suspension (SAS) Bridge Superstructures Contract

A joint venture of American Bridge/Fluor (ABF) has constructed the signature Self-Anchored Suspension (SAS) section of the new east span of the San Francisco-Oakland Bay Bridge. The SAS is a self anchoring suspension span with one main cable that anchors to the eastern end of the roadway deck, rather than to the ground anchorages. All major bridge components are now in place and the bridge opened to traffic over the Labor Day weekend of 2013. Remaining work to be completed includes some field, electrical and mechanical work.

## Yerba Buena Island Transition Structure (YBITS) #1 Contract

MCM Construction, Inc. was the prime contractor that constructed the Yerba Buena Island Transition Structure #1 (YBITS #1) contract. Their work included completing the remaining foundations and the bridge deck structure from the existing double deck Yerba Buena Island Tunnel to the SAS bridge.

MCM has completed both the eastbound and westbound transition structures from the tunnel to Hinge K.

## Yerba Buena Island Transition Structure (YBITS) #2 and Cantilever Demolition Contract

The YBITS #2 contract is demolishing the detour viaduct and will construct a new eastbound on-ramp to the bridge in its place. The contract also includes the cantilever truss demolition, eastbound on ramp and pedestrian/bike path construction. The contract was awarded to California Engineering Contractors Inc/Silverado Contractors Inc. Joint Venture on November 28, 2012. Initial startup activities and submittals began in March 2013, and work has begun on removing cantilever from the upper deck.

## Oakland Touchdown #2 Contract

Flatiron West, Inc. is the prime contractor that constructed the Oakland Touchdown #2 contract which completed the remaining portions of the Oakland Touchdown approach structures from the existing toll plaza to the new span. The westbound structure and portions of the eastbound structure (not in conflict with the existing span) were constructed under the Oakland Touchdown #1 contract. The OTD #2 construction contract started on June 25, 2012. The contractor is in the process of landscaping the area and will construct the remaining portion of the permanent bicycle/pedestrian pathway that is in conflict with the existing bridge by the first quarter of 2015.



The New San Francisco-Oakland Bay Bridge Self-Anchored Suspension Span with Old Cantilever Bridge on Right

# Toll Bridge Seismic Retrofit Program Cost Summary (Millions)

	Contract Status	AB 144/SB 66 Budget (September 2005)	TBPOC Approved Changes	Current TBPOC Approved Budget (September 2013)	Cost to Date (July 2013)	Current Cost Forecast (September 2013)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
<b>SFOBB East Span Seismic Replacement</b>								
Capital Outlay Construction								
Skyway	Completed	1,293.0	(55.8)	1,237.2	1,237.3	1,237.2	-	●
SAS Marine Foundations	Completed	313.5	(38.7)	274.8	274.8	278.6	3.8	●
SAS Superstructure	Construction	1,753.7	293.1	2,046.8	1,837.1	2,081.3	34.5	●
YBI Detour	Completed	131.9	334.2	466.1	466.1	473.3	7.2	●
YBI Transition Structures (YBITS)		299.3	(3.9)	295.4	197.0	315.1	19.7	●
YBITS 1	Construction			199.7	186.1	214.1	14.4	●
YBITS 2 Cantilever and Demo	Awarded			92.4	10.9	97.7	5.3	●
YBITS Landscaping	Design			3.3	-	3.3	-	●
Oakland Touchdown (OTD)		283.8	39.9	323.7	261.3	330.1	6.4	●
OTD 1	Completed			205.0	204.8	203.3	(1.7)	●
OTD 2	Construction			62.0	23.1	73.4	11.4	●
Detour	Completed			51.0	27.7	43.8	(7.2)	●
OTD Electrical Systems	Construction			-	-	-	-	●
Submerged Electric Cable	Completed			5.7	5.7	9.6	3.9	●
Existing Bridge Demolition	Design	239.2	(0.1)	239.1	-	233.3	(5.8)	●
*Cantilever Section	Awarded			-	-	59.9		●
*504/288 Sections	Design			-	-	88.4		●
*Marine Foundations	Design			-	-	85.0		●
Stormwater Treatment Measures	Completed	15.0	3.3	18.3	16.9	18.3	-	●
Other Completed Contracts	Completed	90.4	(0.5)	89.9	90.0	90.5	0.6	●
Capital Outlay Support		959.3	262.3	1,221.6	1,154.1	1,287.8	66.2	●
Right-of-Way and Environmental Mitigation		72.4	-	72.4	51.7	80.4	8.0	●
Other Budgeted Capital		35.1	(32.8)	2.3	0.7	7.7	5.4	●
<b>Total SFOBB East Span Replacement</b>		<b>5,486.6</b>	<b>801.0</b>	<b>6,287.6</b>	<b>5,587.0</b>	<b>6,433.6</b>	<b>146.0</b>	
<b>Antioch Bridge Seismic Retrofit</b>								
Capital Outlay Construction and Mitigation	Completed		51.0	51.0	47.0	50.3	(0.7)	●
Capital Outlay Support			31.0	31.0	23.5	23.8	(7.2)	●
<b>Total Antioch Bridge Seismic Retrofit</b>		<b>-</b>	<b>82.0</b>	<b>82.0</b>	<b>70.5</b>	<b>74.1</b>	<b>(7.9)</b>	●
<b>Dumbarton Bridge Seismic Retrofit</b>								
Capital Outlay Construction and Mitigation	Completed		92.7	92.7	63.4	68.2	(24.5)	●
Capital Outlay Support			56.0	56.0	43.8	45.4	(10.6)	●
<b>Total Dumbarton Bridge Seismic Retrofit</b>		<b>-</b>	<b>148.7</b>	<b>148.7</b>	<b>107.2</b>	<b>113.6</b>	<b>(35.1)</b>	●
Other Program Projects		2,268.4	(63.6)	2,204.8	2,164.3	2,192.5	(12.3)	
Miscellaneous Program Costs		30.0	-	30.0	25.5	30.0	-	●
<b>Net Programmatic Risks</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>70.7</b>	<b>70.7</b>	●
<b>Program Contingency</b>		<b>900.0</b>	<b>(571.1)</b>	<b>328.9</b>	<b>-</b>	<b>167.5</b>	<b>(161.4)</b>	●
<b>Total Toll Bridge Seismic Retrofit Program<sup>2</sup></b>		<b>8,685.0</b>	<b>397.0</b>	<b>9,082.0</b>	<b>7,954.5</b>	<b>9,082.0</b>	<b>-</b>	

## Toll Bridge Seismic Retrofit Program Schedule Summary

	AB 144/SB 66 Project Completion Schedule Baseline (July 2005)	TBPOC Approved Changes (Months)	Current TBPOC Approved Completion Schedule (September 2013)	Current Completion Forecast (September 2013)	Schedule Variance (Months)	Schedule Status	Remarks/ Notes
	g	h	i=g+h	j	k=j-i	l	
<b>SFOBB East Span Seismic Replacement</b>							
Contract Completion							
Skyway	Apr 2007	8	Dec 2007	Dec 2007	-	●	See Page 26
SAS Marine Foundations	Jun 2008	(5)	Jan 2008	Jan 2008	-	●	See Page 20
SAS Superstructure	Mar 2012	29	Aug 2014	Aug 2014	-	●	See Page 21
YBI Detour	Jul 2007	39	Oct 2010	Oct 2010	-	●	See Page 17
YBI Transition Structures (YBITS)	Nov 2013	27	Feb 2016	Feb 2016	-	●	See Page 18
YBITS 1			Dec 2013	Dec 2013	-	●	
YBITS 2			Feb 2016	Feb 2016	-	●	
Oakland Touchdown	Nov 2013	10	Sep 2014	Sep 2014	-	●	See Page 27
OTD 1			Jun 2010	Jun 2010	-	●	
OTD 2			Sep 2014	Sep 2014	-	●	
Submerged Electric Cable			Jan 2008	Jan 2008	-	●	
Existing Bridge Demolition	Sep 2014	18	Dec 2015	March 2017	15	●	
Stormwater Treatment Measures	Mar 2008		Mar 2008	Mar 2008	-	●	
<b>SFOBB East Span Bridge Opening and Other Milestones</b>							
Westbound Seismic Safety Open	Sep 2011	27	Dec 2013	Sep 2013	(3)	●	
Eastbound Seismic Safety Open	Sep 2012	15	Dec 2013	Sep 2013	(3)	●	
Bike/Ped Pathway Open to YBI			Sep 2015	Sep 2015	-	●	
Permanent Eastbound On Ramp Open			Sep 2015	Sep 2015	-	●	
Oakland Detour Eastbound Open			May 2011	May 2011	-	●	
Oakland Detour Westbound Open			Feb 2012	Feb 2012	-	●	
OTD Westbound Access			Aug 2009	Aug 2009	-	●	
YBI Detour Open			Sep 2009	Sep 2009	-	●	See Page 17
<b>Antioch Bridge Seismic Retrofit</b>							
Contract Completion			Jul 2012	Jul 2012	-	●	See Page 35
Seismic Safety Completion			Apr 2012	Apr 2012	-	●	
<b>Dumbarton Bridge Seismic Retrofit</b>							
Contract Completion			Sep 2013	Mar 2013	(6)	●	See Page 32
Seismic Safety Completion			Sep 2013	Jan 2013	(6)	●	

● Within approved schedule and budget

● Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated

● Known project impacts with forthcoming changes to approved schedules and budgets

<sup>(1)</sup> Figures may not sum up to totals due to rounding effects.

<sup>(2)</sup> Construction administration of the OTD Detour is under the YBITS#1 contract.


<sup>(3)</sup> Construction administration of the Cantilever segment will be under the YBITS#2 contract.

## Regional Measure 1 Program Cost Summary (Millions)

	Contract Status	BATA Baseline Budget (July 2005)	BATA Approved Changes	Current BATA Approved Budget (September 2013)	Cost to Date (July 2013)	Current Cost Forecast (September 2013)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
<b>Interstate 880/Route 92 Interchange Reconstruction</b>								
Capital Outlay Construction	Complete	94.8	68.4	163.2	150.2	163.2	-	●
Capital Outlay Support		28.8	35.8	64.6	62.2	64.6	-	●
Capital Outlay Right-of-Way		9.9	7.3	17.2	15.4	17.2	-	●
Project Reserve		0.3	(0.3)	-	-	-	-	
<b>Total I-880/SR-92 Interchange Reconstruction</b>		<b>133.8</b>	<b>111.2</b>	<b>245.0</b>	<b>227.8</b>	<b>245.0</b>	<b>-</b>	
Other Completed Program Projects		1,978.8	182.6	2,161.4	2,089.4	2,161.4	-	
<b>Total Regional Measure 1 Toll Bridge Program <sup>1</sup></b>		<b>2,112.6</b>	<b>293.8</b>	<b>2,406.4</b>	<b>2,317.2</b>	<b>2,406.4</b>	<b>-</b>	

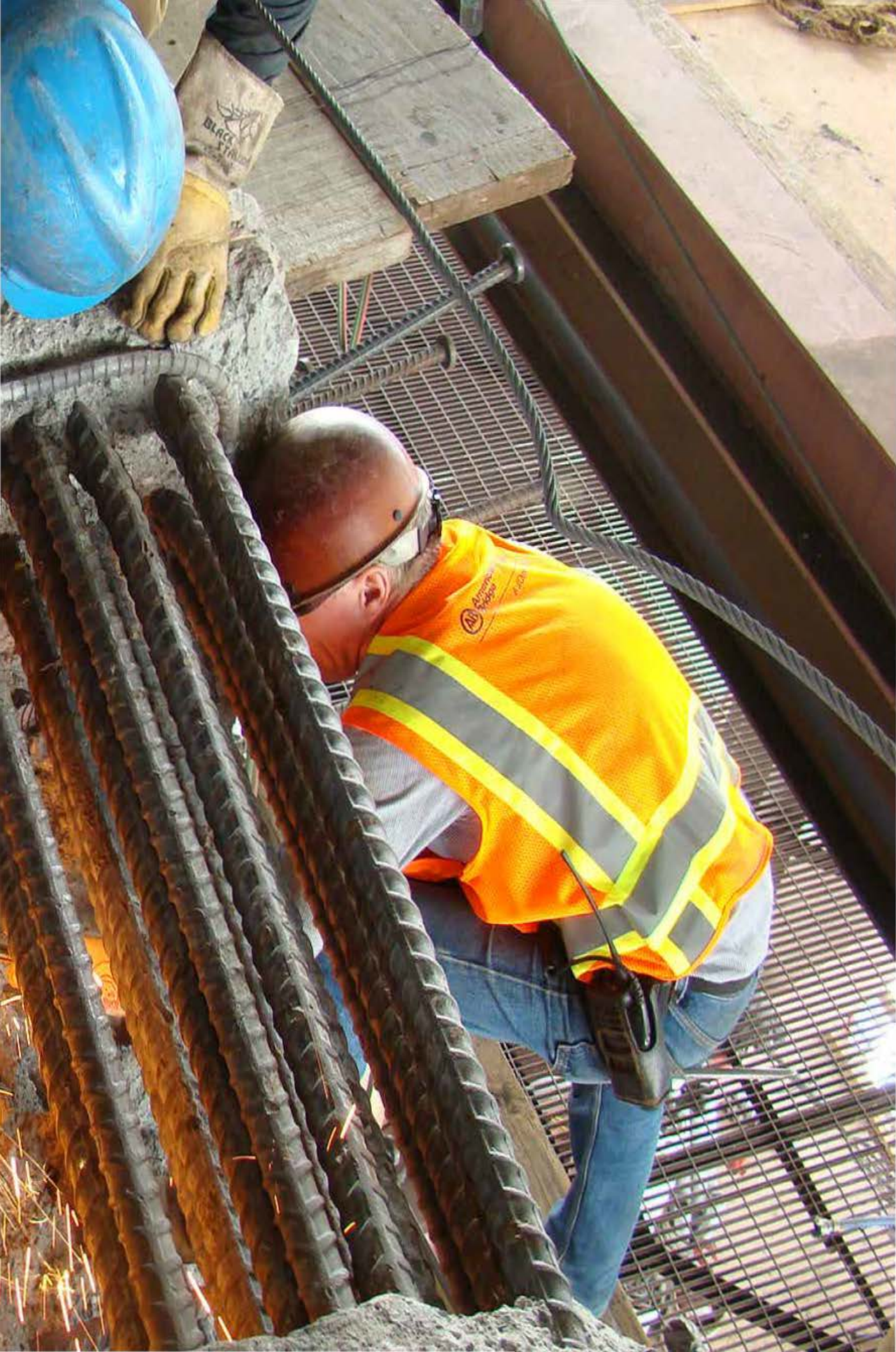
- Within approved schedule and budget
  - Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated
  - Known project impacts with forthcoming changes to approved schedules and budgets
- <sup>1</sup> Figures may not sum up to totals due to rounding effects.

## Regional Measure 1 Program Schedule Summary

	BATA Baseline Completion Schedule (September 2005)	BATA Approved Changes (Months)	Current BATA Approved Completion Schedule (September 2013)	Current Completion Forecast (September 2013)	Schedule Variance (Months)	Schedule Status	Remarks/Notes
	g	h	i = g + h	j	k = j - i	l	
<a href="#">Interstate 880/Route 92 Interchange Reconstruction</a>							
Contract Completion							
Interchange Reconstruction	Dec 2010	9	Sep 2011	Sep 2011	-		See Page 39



The Self-Anchored Suspension Bridge Cutting Rebar at the E2 Cap Beam in Preparation for Setting upper Saddle



**TOLL BRIDGE SEISMIC RETROFIT PROGRAM**

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge Seismic Retrofit Strategy

When a 250-ton section of the upper deck of the East Span collapsed during the 7.1-magnitude Loma Prieta Earthquake in 1989, it was a wake-up call for the entire Bay Area. While the East Span quickly reopened within a month, a critical question lingered: How could the Bay Bridge - a vital regional lifeline structure - be strengthened to withstand the next major earthquake? Seismic experts from around the world determined that to make each separate element seismically safe on a bridge of this size, the work must be divided into numerous projects. Each project presents unique challenges. Yet there is one common challenge - the need to accommodate the more than 280,000 vehicles that cross the bridge each day.



The San Francisco-Oakland Bay Bridge West Approach Overview

#### West Approach Seismic Replacement Project

**Project Status: Completed 2009**

Seismic safety retrofit work on the West Approach in San Francisco, bounded on the west by Fifth Street and on the east by the anchorage of the west span at Beale Street, involved completely removing and replacing this one-mile stretch of Interstate 80, as well as six on-and off-ramps within the confines of the West Approach's original footprint. This project was completed on April 8, 2009.

#### West Span Seismic Retrofit Project

**Project Status: Completed 2004**

The West Span lies between Yerba Buena Island and San Francisco and is made up of two complete suspension spans connected at a center anchorage. Retrofit work included adding massive amounts of steel and concrete to strengthen the entire West Span, along with new seismic shock absorbers and bracing.



San Francisco-Oakland Bay Bridge West Span



## East Span Seismic Replacement Project

**Project Status: 95% Complete as of September 2013**

Rather than a seismic retrofit, the two-mile long East Span has been completely rebuilt. The new East Span consists of several different sections, appears as a single streamlined span. The eastbound and westbound lanes of the East Span no longer include upper and lower decks. The lanes are side-by-side, providing motorists with expansive views of the bay. These views are also enjoyed by bicyclists and pedestrians, thanks to a new

bike/pedestrian path on the south side of the bridge that will extend all the way to Yerba Buena Island. The new span features the world's longest Self-Anchored Suspension (SAS) bridge that connects to an elegant roadway supported by piers (Skyway), which gradually slopes down toward the Oakland shoreline (Oakland Touchdown).



Eastern Span of the San Francisco-Oakland Bay Bridge and Oakland Toll Plaza Area at Seismic Safety Opening

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Summary

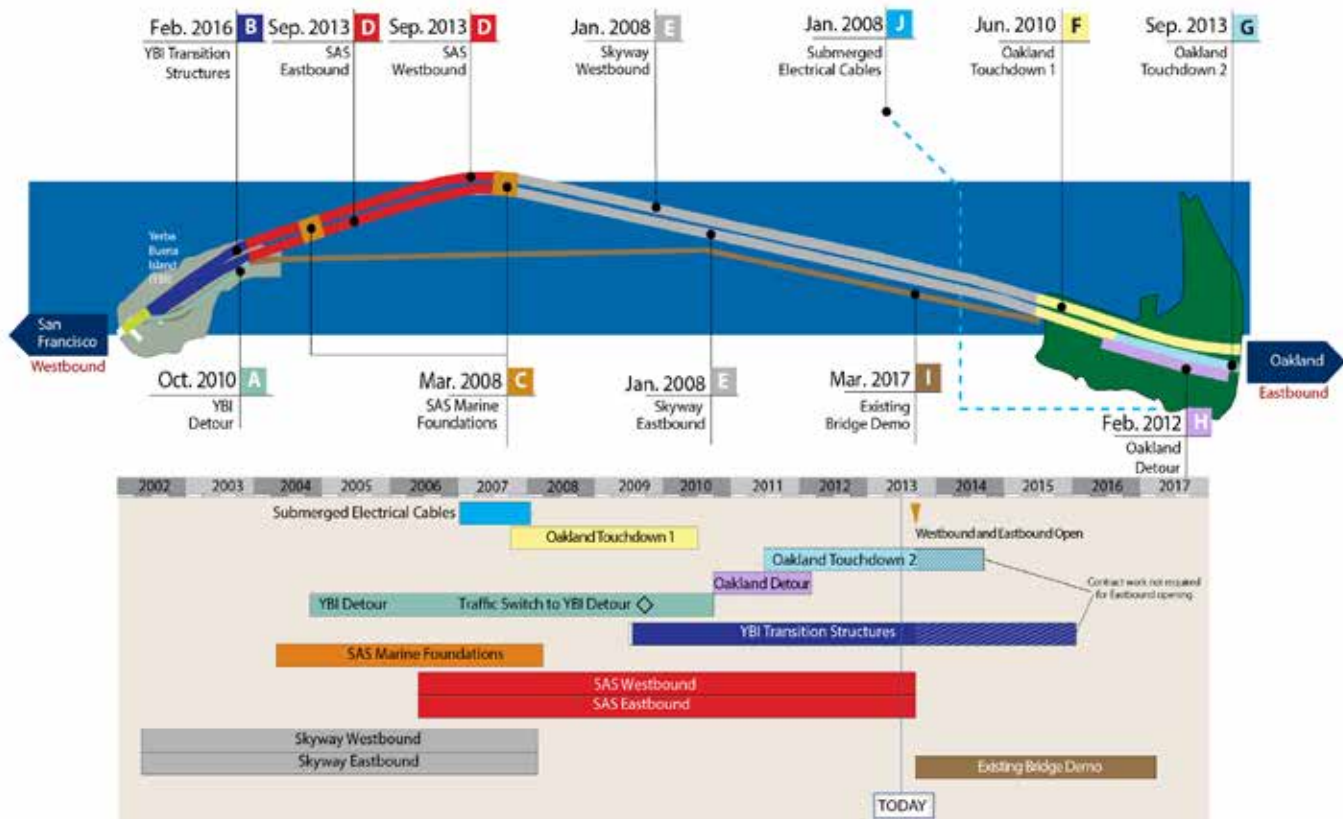
The new East Span bridge can be split into four major components - the Skyway, the Self-Anchored Suspension bridge in the middle, the Yerba Buena Island Transition Structures and Oakland Touchdown approaches. Each component has been constructed by one to three separate contracts that were sequenced together to reduce schedule risk.

Highlighted below are the major East Span contracts and their schedules. The letter designation before each contract corresponds to contract descriptions in the report.



Overview of the New San Francisco-Oakland Bay Bridge East Span Construction Progress

#### SFOBB East Span Work Sequence



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Yerba Buena Island Detour (YBID)

As with all of the Toll Bridge Seismic Retrofit Program's projects, crews built the Yerba Buena Island Detour (YBID) structure without disrupting traffic. To accomplish this task, YBID eastbound and westbound traffic was shifted off the existing roadway and onto a temporary detour over Labor Day weekend 2009. Drivers will use this detour, just south of the original roadway, until traffic is moved onto the new East Span.

#### A YBID Contract

Contractor: C.C. Myers, Inc.

Approved Capital Outlay Budget: \$466.1 M

Status: Completed October 2010

This contract was originally awarded in early 2004 to construct the detour structure for the planned 2006 opening of the new East Span. Because of a lack of funding, the SAS Superstructure contract was re-advertised in 2005 and the opening was rescheduled to 2013. To better integrate the contract into the current East Span schedule and to improve seismic safety and mitigate future construction risks, the TBPOC approved a number of changes to the contract, including adding the deck replacement work near the tunnel that was rolled into place over the Labor Day 2007 weekend advancing future transition structure foundation work and making design enhancements to the temporary detour structure. These changes increased the budget and forecast for the contract to cover the revised project scope and reduce project risks.



YBID East Tie-In Rolled in on Labor Day 2009 Weekend



West Tie-In Phase # 1 Rolled in on Labor Day Weekend 2007

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Yerba Buena Island Transition Structures (YBITS)

The new Yerba Buena Island Transition Structures contract (YBITS) will connect the new SAS bridge span to the existing Yerba Buena Island Tunnel, transitioning the new side-by-side roadway decks to the upper and lower decks of the tunnel. The new structures will be cast-in-place reinforced concrete structures that will look very similar to the already constructed Skyway structures. While some YBITS foundations and columns were advanced by the YBID contract, the remaining work is being completed under three separate YBITS contracts.

#### **B** YBITS #1 Contract

Contractor: MCM Construction, Inc.

Approved Capital Outlay Budget: \$199.7 M

Status: 90% Complete as of September 2013

MCM Construction, Inc. was the prime contractor constructing the Yerba Buena Island Transition Structure #1 (YBITS #1) contract. Their work included completing the remaining foundations and the bridge deck structure from the existing double deck Yerba Buena Island Tunnel to the SAS bridge.

Status: Punchlist work and cleanup is ongoing.

#### YBITS #2 and Cantilever Demolition Contract

Contractor: CEC & Silverado (JV)

Approved Capital Outlay Budget: \$92.4 M

Status: Contract Awarded

The YBITS #2 contract will demolish the detour viaduct now that the traffic has been switched to the new bridge and will construct a new eastbound on-ramp to the bridge in its place. The contract also includes the cantilever truss demolition, and bike path construction.

The contract was awarded to California Engineering Contractors Inc/Silverado Contractors Inc. Joint Venture on November 28, 2012. Initial startup activities and submittals began in March 2013, with actual dismantling to start after the planned seismic safety opening on Labor Day weekend 2013.

**Status:** The contractor is in the process of preparing RFIs, CCOs, SWPPP and a bird nesting monitoring program in preparation for the cantilever demolition after the Labor Day 2013 opening of the new span.

#### YBITS Landscaping Contract

Contractor: TBD

Approved Capital Outlay Budget \$3.3 M

Status: In Design

Upon completion of the YBITS #2 work, a follow-on landscaping contract will be executed to replant and landscape the area.

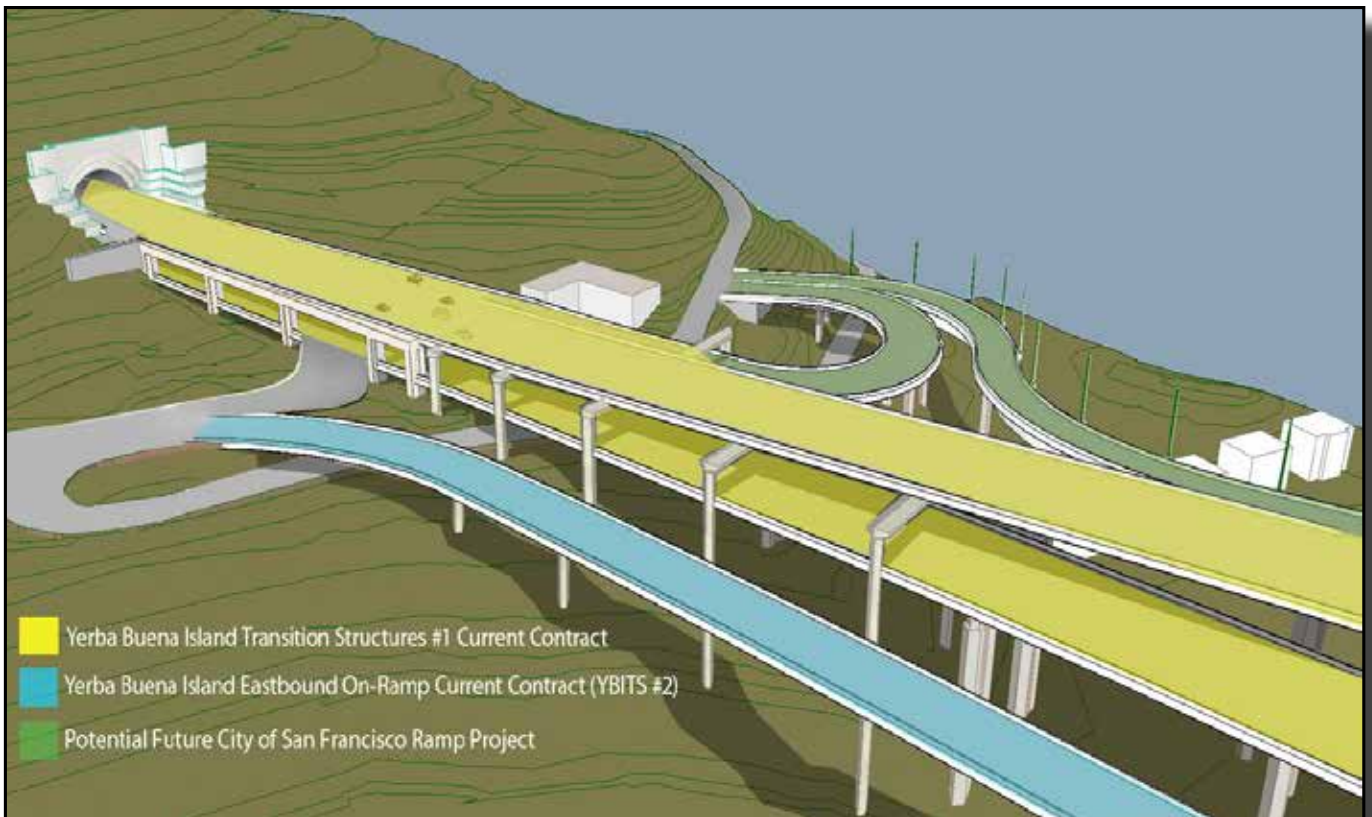


Birds-Eye View Simulation of the Yerba Buena Island Transition Structures and the New San Francisco-Oakland Bay Bridge Eastbound On Ramp and Bike Path after Demolition of the Existing Structure





Aerial View of the Self-Anchored Suspension Bridge Tower and Transition Structures on Seismic Opening Day  
September 2, 2013



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Self-Anchored Suspension (SAS) Bridge

If one single element bestows world class status on the new Bay Bridge East Span, it is the Self-Anchored Suspension (SAS) bridge. This engineering marvel is the world's largest SAS span at 2,047 feet in length, as well as the first bridge of its kind built with a single tower.

The SAS was separated into three separate contracts - construction of the land-based foundations and columns at pier W2; construction of the marine-based foundations and columns at piers T1 and E2; and construction of the SAS steel superstructure, including the tower, roadway and cabling. Construction of the foundations at pier W2 and at piers T1 and E2 was completed in 2004 and 2007, respectively.

#### SAS Land Foundation Contract

Contractor: West Bay Builders, Inc.  
Approved Capital Outlay Budget: \$26.5 M  
Status: Completed October 2004

The twin W2 columns on Yerba Buena Island provide essential support for the western end of the SAS bridge, where the single main cable for the suspension span will extend down from the tower and wrap around and under the western end of the roadway deck. Each of these huge columns required massive amounts of concrete and steel and are anchored 80 feet into the island's solid bedrock.



SAS Marine E2 and the Skyway Westbound Foundation and Columns

#### C SAS Marine Foundations Contract

Contractor: Kiewit/FCI/Manson, Joint Venture  
Approved Capital Outlay Budget: \$274.8 M  
Status: Completed January 2008

Construction of the piers at E2 and T1 (see rendering on facing page) required significant on-water resources to drive the foundation support piles down, not only to bedrock, but also through the bay water and mud.

The T1 foundation piles extend 196 feet below the waterline and are anchored into bedrock with heavily reinforced concrete rock sockets that are drilled into the rock. Driven nearly 340 feet deep, the steel and concrete E2 foundation piles were driven 100 feet deeper than the deepest timber piles of the existing east span in order to get through the bay mud and reach solid bedrock.



## D SAS Superstructure Contract

Contractor: American Bridge/Fluor Enterprises, Joint Venture

Approved Capital Outlay Budget: \$2.05 B

Status: **95% Complete as of September 2013**

The SAS bridge is not just another suspension bridge. Rising 525 feet above mean sea level and embedded in bedrock, the single-tower SAS span is designed to withstand a massive earthquake. Traditional main cable suspension bridges have twin cables with smaller suspender cables connected to them. While there appears to be two main cables on the SAS, it is actually a single continuous cable. This single cable is anchored within the eastern end of the roadway, carried over the tower and then wrapped around the two side-by-side decks at the western end.

The single-steel tower is made up of four separate legs connected by shear link beams, which function much like a fuse in an electrical circuit. These beams will absorb most of the impact from an earthquake, preventing damage to the tower legs.

Two hundred steel wire suspender ropes attached to 100 cable bands along the single main cable did the heavy lifting during load transfer. Sets of suspender ropes were gradually tensioned using hydraulic jacks. As each cable

band carries two ropes, there are four hydraulic jacks (each exerting as much as 400 tons of force) at each corresponding location along the outside of the road decks tensioning and pulling the ropes into position.

**Status:** Painting of the wind vortex plates and traveler testing is ongoing. Preparation work for the removal of the temporary foundations continues. Installation of navigation lights and fog horns continues and other electrical and mechanical work is ongoing.



New Self-Anchored Suspension Span

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Self-Anchored Suspension (SAS) Construction Sequence

#### STEP 1 - CONSTRUCT TEMPORARY SUPPORT STRUCTURES

All temporary support foundations and structures were completed between the Skyway and Yerba Buena Island by September 2010 to support the westbound and eastbound roadway box erections.

**Status:** Removal of the westbound and eastbound temporary support structures and foundations continue. Hinge A eastbound and westbound support were removed in August 2013.



Step 1

#### STEP 2 - INSTALL ROADWAYS

All of the 28 steel roadway boxes and 17 crossbeams have been erected as of the end of October 2011.

**Status:** Complete.



Step 2

#### STEP 3 - INSTALL TOWER

All tower legs, tower grillage, tower saddle and tower head were erected using the self-rising crane as of mid-August 2012.

**Status:** Complete.



Step 3



#### STEP 4 - MAIN CABLE AND SUSPENDER INSTALLATION

The main cable haul started from the east end of the westbound roadway deck moving over the tower saddle, wrapping around pier W2 west deviation saddles and returning to the tower saddle to the east end of eastbound roadway deck where it is anchored. The cable band and suspender cables were then installed to lift the roadway deck off the temporary support structure.

**Status:** Complete.



Step 4

#### STEP 5 - WESTBOUND AND EASTBOUND SEISMIC SAFETY OPENING

The new bridge opened simultaneously in both westbound and eastbound directions.

**Status:** Complete.



Step 5

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

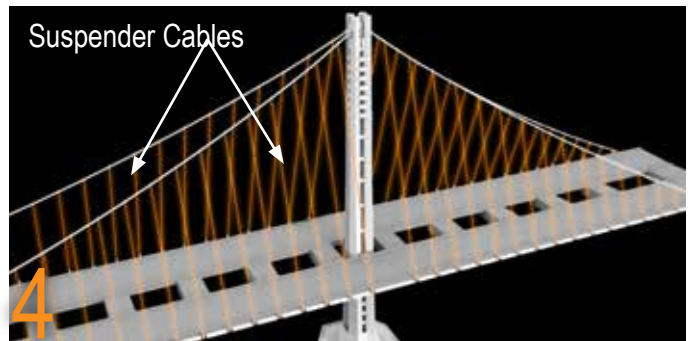
### Self-Anchored Suspension (SAS) Superstructure Main Cable Completion Activities



#### 1 CABLE STRAND HAULING

Crews haul the 137 individual steel wire strands that comprise the nearly 1-mile long single main cable. The strands are adjusted and then anchored into the east end of the SAS.

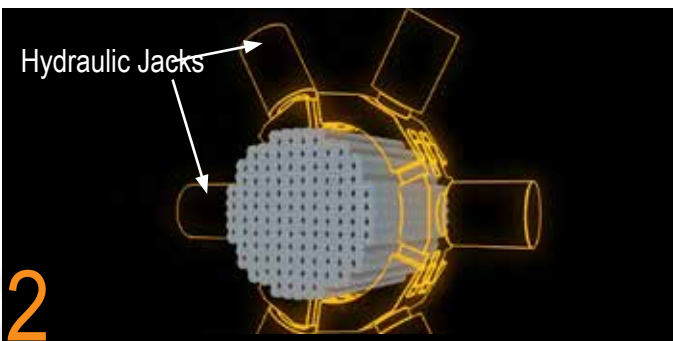
**Status: Complete**



#### 4 SUSPENDER CABLES INSTALLATION

Workers begin placing the suspender cables that connect the main cable to the road-decks. Not all of the suspender cables need to be attached before load transfer begins.

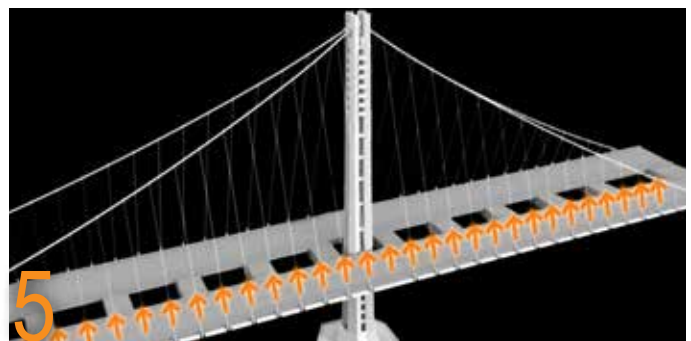
**Status: Complete**



#### 2 CABLE STRAND COMPACTING

Four compacting machines containing hydraulic jacks are used to compress the 137 steel wire strands into the shape of the main cable. Temporary bands are placed to maintain the shape.

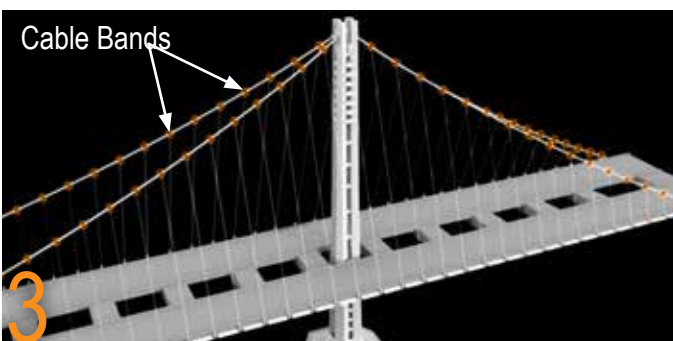
**Status: Complete**



#### 5 LOAD TRANSFER (see facing page)

Using the attached suspender cables, crews begin the process of transferring the weight of the span from the temporary supports under the bridge to the main cable.

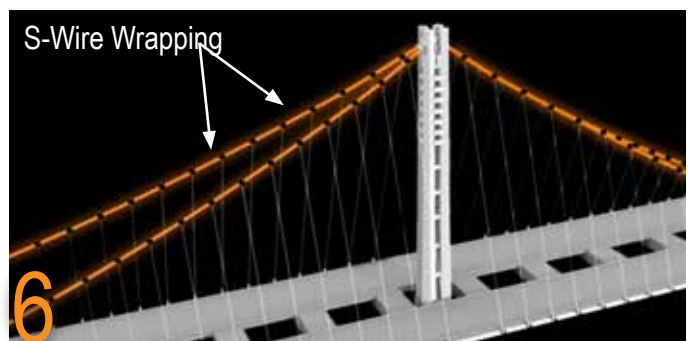
**Status: Complete**



#### 3 CABLE BANDS INSTALLATION

Crews installed 114 permanent steel cable bands along the main cable. These bands maintain the shape of the cable, and serve as anchor points for the suspender cables.

**Status: Complete**



#### 6 S-WIRE WRAP

After load transfer, the main cable is wrapped in S-wire to protect the cable against corrosion. After the cable is wrapped, it is painted.

**Status: Complete**

# Load Transfer Sequence

## Phase 1

Jack and tension 26 of 50 suspender groups each side – 8 at a time in 3 steps – 2 in the fourth step then final adjustments in steps 5 to 18. In the first 8 steps - 80% of the load will be transferred from the temporary truss to the cable.

Status: Complete

### Load Transfer Phase 1

## Phase 2

Jack and tension 3 more suspender groups out of 50 from each side to bring to a total of 29 of 50 each side.

Status: Complete

### Load Transfer Phase 2

## Phase 3

Jack and tension final 21 of 50 suspender groups each side to bring total suspenders tensioned to 50 out of 50 each side.

Status: Complete.

### Load Transfer Phase 3

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Skyway

The Skyway, which comprises much of the new East Span, will drastically change the appearance of the Bay Bridge. Replacing the gray steel that currently cages drivers, a graceful, elevated roadway supported by piers is now providing sweeping views of the bay.

#### **E** Skyway Contract

**Contractor:** Kiewit/FCI/Manson, Joint Venture

**Approved Capital Outlay Budget:** \$1.24 B

**Status:** Completed April 2008

Extending for more than a mile across Oakland mudflats, the Skyway is the longest section of the East Span. It sits between the new Self-Anchored Suspension (SAS) span and the Oakland Touchdown. In addition to incorporating the latest seismic-safety technology, the side-by-side roadway decks of the Skyway feature shoulders and lane widths built to modern standards.

The Skyway's decks are composed of 452 pre-cast concrete segments (standing three stories high), containing approximately 200 million pounds of structural steel, 120 million pounds of reinforcing steel, 200 thousand linear feet of piling and about 450 thousand cubic yards of concrete. These are the largest segments

of their kind ever cast and were lifted into place by custom-made winches.

The Skyway marine foundation consists of 160 hollow steel pipe piles measuring eight feet in diameter and dispersed among 14 sets of piers. The 365-ton piles were driven more than 300 feet into the deep bay mud. The new East Span piles were battered or driven in at an angle, rather than vertically, to obtain maximum strength and resistance.

Designed specifically to move during a major earthquake, the Skyway features several state-of-the-art seismic safety innovations, including 60-foot-long hinge pipe beams. These beams allow deck segments on the Skyway to move, enabling the deck to withstand greater motion and to absorb more earthquake energy.

**Status:** Opened to traffic, September 2, 2013.



The New San Francisco-Oakland Bridge Skyway and Self-Anchored Suspension Bridge

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Oakland Touchdown

When completed, the Oakland Touchdown (OTD) structures will connect Interstate 80 in Oakland to the side-by-side decks of the new East Span. For westbound drivers, the OTD will be their introduction to the graceful new East Span. For eastbound drivers from San Francisco, this section of the bridge will carry them from the Skyway to the East Bay, offering unobstructed views of the Oakland hills.

The OTD approach structures to the Skyway will be constructed in three phases. The first phase, constructed under the OTD #1 contract, built the new westbound approach structure. Due to physical constraints with the existing bridge, the OTD #1 contract was only able to construct a portion of the eastbound approach. To facilitate opening the bridge in both directions at the same time, the second phase of work, performed by the Oakland Detour contractor, included widening the upper deck of the Oakland end of the existing bridge to allow for a traffic shift to the north that removes the physical constraint to completing the eastbound structure. This phase was completed in April 2012. The third phase, to be constructed by a future OTD #2 contract, will complete the eastbound lanes and provide the traffic switch to the new structure in both directions, thus allowing the bridge to open simultaneously in both directions.

#### **F** Oakland Touchdown #1 Contract

Contractor: MCM Construction, Inc.

Approved Capital Outlay Budget: \$205.0 M

Status: Completed June 2010

The OTD #1 contract constructed the entire 1,000-foot-long westbound approach from the toll plaza to the Skyway. When open to traffic, the westbound approach structure will provide direct access to the westbound Skyway. In the eastbound direction, the contract constructed a portion of the eastbound structure and all of the eastbound foundations that are not in conflict with the existing bridge.

#### **G** Oakland Touchdown #2 Contract

Contractor: Flatiron West, Inc.

Approved Capital Outlay Budget: \$62.0 M

Status: 60% Complete as of September 2013

Flatiron West, Inc. is the prime contractor constructing the Oakland Touchdown #2 contract that will complete the remaining portions of the Oakland Touchdown Approach structures from the existing toll plaza to the new span. The contractor is also responsible for the construction of the bike path and final landscaping of the area.

**Status:** Review of RFIs, submittals, and preparation of CCOs is ongoing. Placing of falsework for the bike path has begun.



Aerial View of the Eastbound Oakland Touchdown #2 Construction Progress

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Existing East Span Bridge Demolition

#### I Existing SFOBB Dismantling Contracts

Approved Capital Outlay Budget: \$239.1 M

To expedite the opening of a new eastbound on ramp and the pedestrian/bicycle pathway from Yerba Buena Island to the SAS and to maximize contractor efficiencies, the TBPOC has decided to split the dismantling of the existing bridge into multiple contracts. The dismantling of the superstructure of the main cantilever section of the existing bridge has been incorporated into the YBITS #2 contract. The dismantling of the remaining portions of the bridge will likely be performed under separate superstructure (above water) removal and marine foundation (below water) contracts. These contracts are still in design and may change in scope over time.

**Status:** The cantilever portion of the demolition contract was awarded to CEC and Silverado (JV) on November 28, 2012. Construction start-up activities began in March 2013. The contractor is continuing the process of preparing RFIs and submittals and monitoring and installing bird

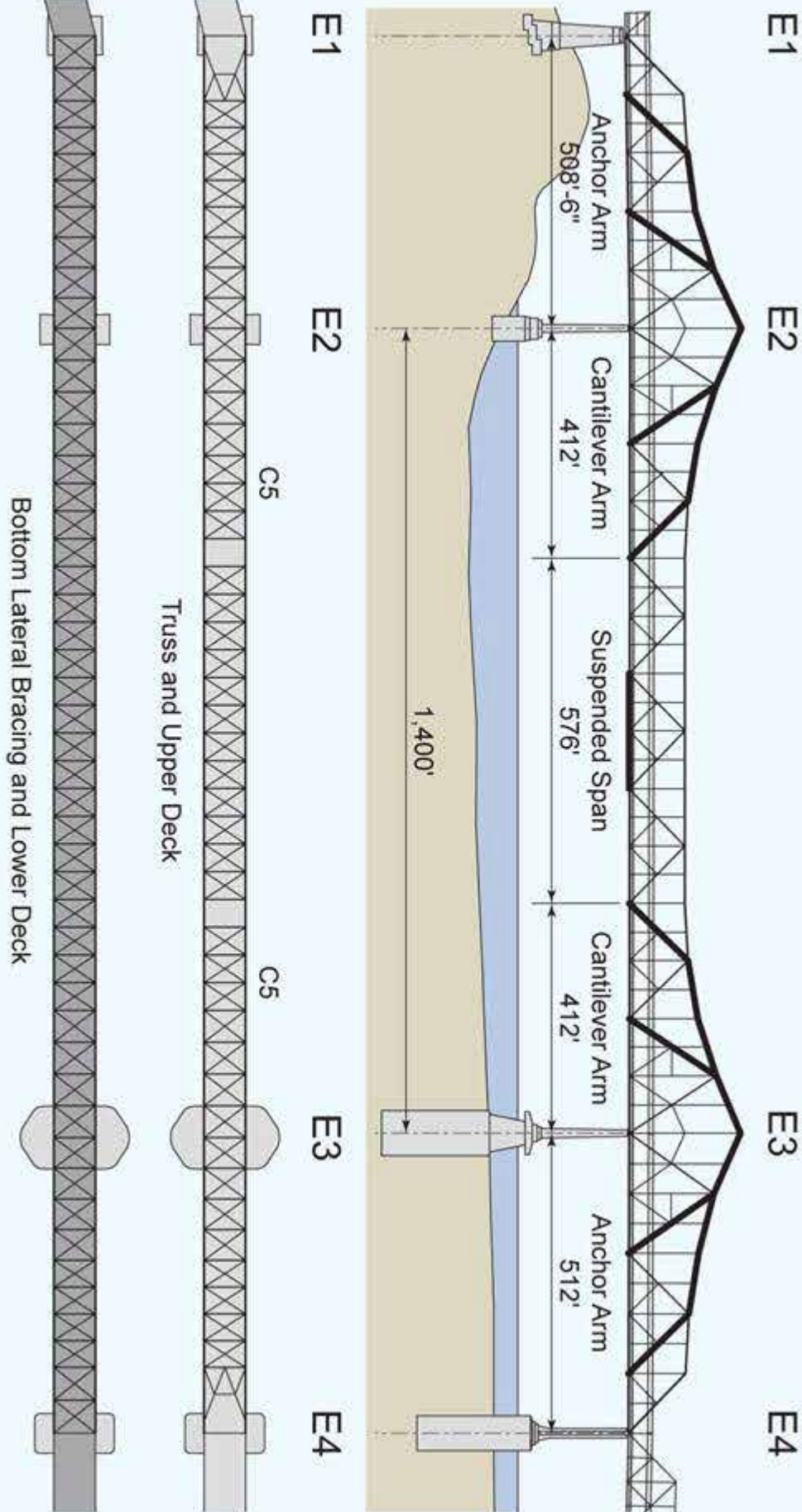


Cantilever section of the Old eastbound Bridge Section Included in the YBITS #2 Contract for Removal next to the New Bridge

deterrence measures on the cantilever bridge. Removal of the cantilever from the upper deck will begin on Monday, the 21st of October.



# Cantilever Truss Demolition



THE SAN FRANCISCO-OAKLAND BAY BRIDGE  
EAST SPAN SEISMIC SAFETY PROJECT

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Other Contracts

A number of contracts needed to relocate utilities, clear areas of archeological artifacts and prepare areas for future work have already been completed. The last major contract will be the eventual demolition and removal of the existing bridge, which by that time will have served the Bay Area for nearly 80 years. Following is a status of some the other East Span contracts.

#### **J** Electrical Cable Relocation

Contractor: Manson Construction

Approved Capital Outlay Budget: \$9.6 M

Status: Completed January 2008

A submerged cable from Oakland that is close to where the new bridge will touch down supplies electrical power to Treasure Island. To avoid any possible damage to the cable during construction, two new replacement cables were run from Oakland to Treasure Island. The extra cable was funded by the Treasure Island Development Authority.



Archeological Investigations

#### Yerba Buena Island Substation

Contractor: West Bay Builders

Approved Capital Outlay Budget: \$11.3 M

Status: Completed May 2005

This contract relocated an electrical substation just east of the Yerba Buena Island Tunnel in preparation for the new East Span.



New YBI Electrical Substation



## Stormwater Treatment Measures

Contractor: Diablo Construction, Inc.

Approved Capital Outlay Budget: \$18.3 M

Status: Completed December 2008

The Stormwater Treatment Measures contract implemented a number of best practices for the management and treatment of stormwater runoff. Focused on the areas around and approaching the toll plaza, the contract added new drainage and built new bio-retention swales and other related constructs.



Stormwater Retention Basin

## East Span Interim Seismic Retrofit

Contractors: 1) California Engineering

2) Balfour Beatty

Approved Capital Outlay Budget: \$30.8 M

Status: Completed October 2000

After the 1989 Loma Prieta Earthquake, and before the final retrofit strategy was determined for the East Span, Caltrans completed an interim retrofit of the existing bridge to prevent a catastrophic collapse of the bridge should a similar earthquake occur before the East Span was completely replaced. The interim retrofit was performed under two separate contracts that lengthened pier seats, added some structural members, and strengthened areas of the bridge so they would be more resilient during an earthquake.



The existing East Span Cantilever Section of the San Francisco-Oakland Bay Bridge to be Demolished after Seismic Safety Opening of the New Bridge

## Pile Installation Demonstration

Contractor: Manson and Dutra, Joint Venture

Approved Capital Outlay Budget: \$9.2 M

Status: Completed December 2000

While large-diameter battered piles are common in offshore drilling, the new East Span is one of the first bridges to use them in its foundations. To minimize project risks and build industry knowledge, a pile installation demonstration project was initiated to prove the efficacy of the proposed technology and methodology. The demonstration was highly successful and helped result in zero contract change orders or claims for pile driving on the project.



Battered Pile Installation Demonstration

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Other Completed Projects

In the 1990s, the State Legislature identified seven of the nine state-owned toll bridges for seismic retrofit. In addition to the San Francisco-Oakland Bay Bridge, these included the Benicia-Martinez, Carquinez, Richmond-San Rafael and San Mateo-Hayward bridges in the Bay Area, and the Vincent Thomas and Coronado bridges in Southern California. Other than the East Span of the Bay Bridge, the retrofits of all of the bridges have been completed as planned.

### San Mateo-Hayward Bridge Seismic Retrofit Project

#### Project Status: Completed 2000

The San Mateo-Hayward Bridge seismic retrofit project focused on strengthening the high-rise portion of the span. The foundations of the bridge were significantly upgraded with additional piles.



High-Rise Section of San Mateo-Hayward Bridge

### 1958 Carquinez Bridge Seismic Retrofit Project

#### Project Status: Completed 2002

The eastbound 1958 Carquinez Bridge was retrofitted in 2002 with additional reinforcement of the cantilever thru-truss structure.

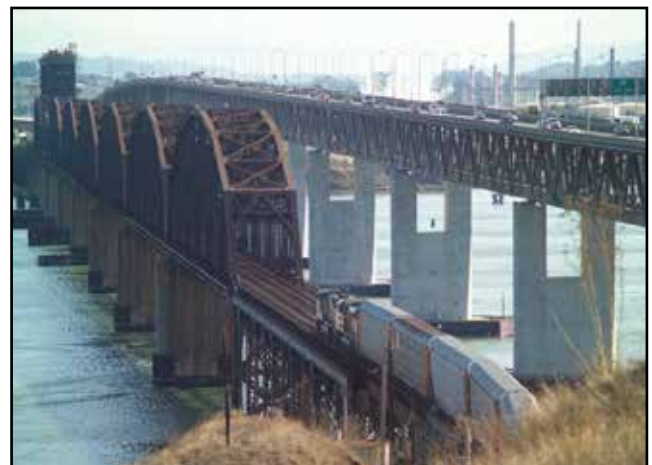


1958 Carquinez Bridge (foreground) with the 1927 Span (middle) under Demolition and the New Alfred Zampa Memorial Bridge (background)

### 1962 Benicia-Martinez Bridge Seismic Retrofit Project

#### Project Status: Completed 2003

The southbound 1962 Benicia-Martinez Bridge was retrofitted to "Lifeline" status with the strengthening of the foundations and columns and the addition of seismic bearings that allow the bridge to move during a major seismic event. The Lifeline status means the bridge is designed to sustain minor to moderate damage after a seismic event and to reopen quickly to emergency response traffic.



1962 Benicia-Martinez Bridge (right)

### Richmond-San Rafael Bridge Seismic Retrofit Project

#### Project Status: Completed 2005

The Richmond-San Rafael Bridge was retrofitted to a "No Collapse" classification to avoid catastrophic failure during a major seismic event. The foundations, columns, and truss of the bridge were strengthened, and the entire low-rise approach viaduct from Marin County was replaced.

## Los Angeles-Vincent Thomas Bridge Seismic Retrofit Project

### Project Status: Completed 2000

The Vincent Thomas Bridge is a 1,500-foot long suspension bridge crossing the Los Angeles Harbor in Los Angeles that links San Pedro with Terminal Island. The bridge was one of two state-owned toll bridges in Southern California (the other being the San Diego-Coronado Bridge). Opened in 1963, the bridge was seismically retrofitted as part of the TBSRP in 2000.



Los Angeles-Vincent Thomas Bridge

## San Diego-Coronado Bridge Seismic Retrofit Project

### Project Status: Completed 2002

The San Diego-Coronado Bridge crosses over San Diego Bay and links the cities of San Diego and Coronado. Opened in 1969, the 2.1-mile long bridge was seismically retrofitted as part of the TBSRP in 2002.

## Antioch Bridge Seismic Retrofit Project

### Project Status: Completed 2012

Serving the Delta region of the Bay Area, the Antioch Bridge takes State Route 160 traffic over the San Joaquin River, linking eastern Contra Costa County with Sacramento County. The current 1.8-mile-long steel plate girder bridge was opened in 1978 with one lane in each direction. The major retrofit measure for the bridge includes installing seismic isolation bearings at each of the 41 piers, strengthening piers 12 through 31 with steel cross-bracing between column bents, and installing steel casings at all columns located at the Sherman Island approach slab bridge.



Antioch Bridge

## Dumbarton Bridge Seismic Retrofit Project

### Project Status: Completed 2013

The current Dumbarton Bridge was opened to traffic in 1982 linking the cities of Newark in Alameda County and East Palo Alto in San Mateo County. The 1.6-mile long bridge has six lanes (three in each direction) and an eight-foot-wide bicycle/pedestrian pathway. The bridge is a combination of three bridge types; reinforced concrete slab approaches supported on multiple pile extension columns, precast-prestressed concrete delta girders and steel box girders supported on reinforced concrete piers. The current retrofit strategy for the bridge included superstructure and deck modifications and installation of isolation bearings.



Dumbarton Bridge

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM Risk Management Program Update

### POTENTIAL DRAW ON PROGRAM RESERVE (PROGRAM CONTINGENCY)

The program contingency is currently \$329 million in accordance with the TBPOC approved budget. As of the end of the third quarter of 2013, the 50 percent probable draw on program contingency is \$159 million. The potential draw ranges from about \$75 million to \$250 million (refer to Figure 1).

The current program contingency balance is sufficient to cover the cost of currently identified risks. In accordance with the approved TBSRP risk management plan, risk mitigation actions are continuously developed and implemented to reduce the potential draw on the program contingency.

### RISK MANAGEMENT DEVELOPMENTS

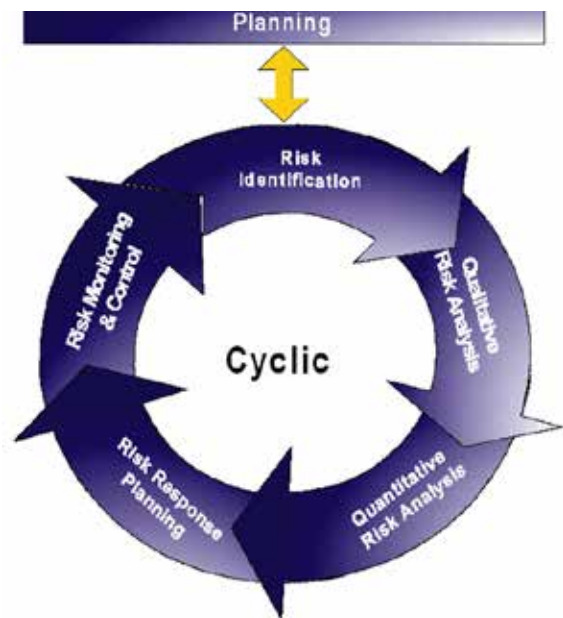
The risk team developed an hourly schedule for the seismic safety opening weekend work and continued to update it as information became available. Planning for the weekend work included coordination of the work zones, access/egress to the work sites and obtaining commitments from suppliers and sub-contractors. The weekend work was performed successfully and the bridge opened to traffic seven hours before the deadline.

### RISK MANAGEMENT LOOK AHEAD

The on-going risk analysis of the SSO weekend schedule will include duration uncertainties of planned activities, as well as weather risks that affect certain activities. The team will use the schedule risk model to mitigate risks and recommend the number of days to close the bridge so that there is a high probability of completing on time.

### OTD #2 Contract

When the OTD #2 contract was advertised, the plans for the temporary bike path were being developed. Now that plans for the temporary bike path have been finalized, the project team recognizes that there are conflicts, impacts and added risks to the OTD #2 contract completion. Discussions about the impacts continue, and alternate staging plans are being developed to address contract completion.



### SAS Contract

The SAS contractor has work to complete, some of which will be performed using lane closures. This may create inefficiencies in the work, with a potential delay risk beyond the contractor's planned completion. Changes to the tower fender pile driving requirements and cleaning of fender embeds may also extend the contract completion time. The SAS risk team will continue to work to minimize and/or mitigate these delays.

### Dismantling Projects

Aggressive planning continues for dismantling the marine foundations and trusses of the East Span. Obtaining permits for the marine structures removal will be the most challenging portion of this contract because it involves underwater work in the San Francisco Bay. Caltrans has engaged various environmental, hydro-acoustic, and water quality experts to prepare the permitting documents, and assist in mitigating the identified risks.

The presence of lead paint on the steel superstructure poses potential risks to worker safety and air quality. Caltrans is consulting with Cal-OSHA and the Bay Area Air Quality Management board to determine whether the Caltrans standard engineering controls, used on other Bay Area projects in the past, will provide sufficient risk mitigation.

For all dismantling projects, environmental issues have the potential to lengthen the time to project completion. These risks include: bird nesting, hazardous materials, accidental discharge into the Bay, marine environment work windows, and air quality management. They are being closely monitored and mitigated to the extent possible.

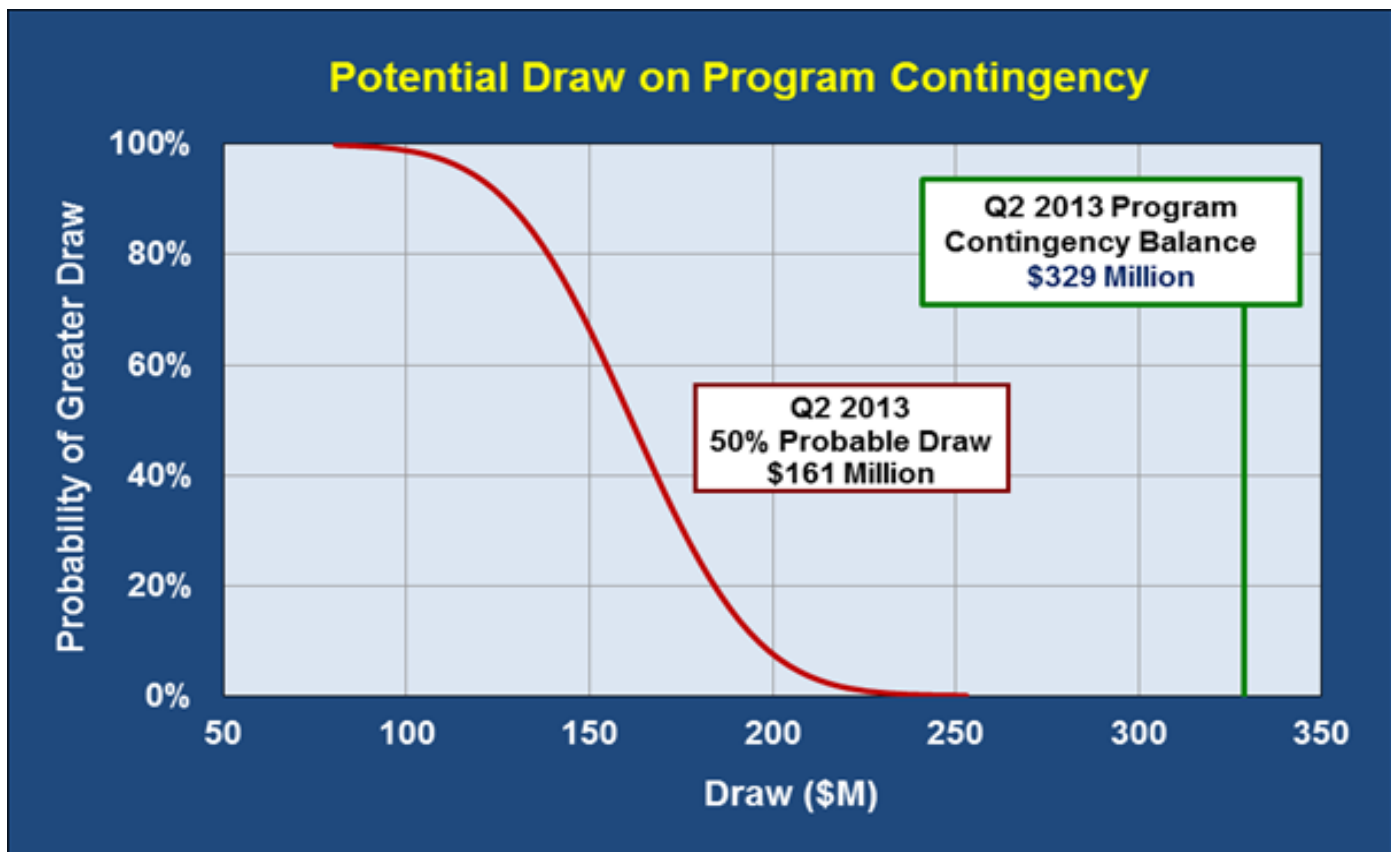


Figure 1 – Potential Draw on Program Contingency\*

\*Figure 1 Notes:

1. Proposed architectural enhancements and project improvements are excluded unless approved by the TBPOC.
2. Program Contingency may be used for other beneficial purposes than to cover risks. Therefore, the potential draw chart may not necessarily represent a forecast of the future balance of program contingency funds.



The Former San Francisco-Oakland Bay Bridge Being Prepared for Dismantling

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Program Funding Status

AB 144 established a funding level of \$8.685 billion for the TBSRP. As of December 31, 2010, seismic retrofitting of Antioch and Dumbarton Bridges became part of the Toll Bridge Seismic Retrofit Program with the passage of AB 1175, which provided another \$750 million bringing the total funding to \$9.435 billion. The program funding sources are shown in Table 1- Program Budget.

**Table 1—Program Budget as of September 30, 2013 (\$ Millions)**

	Budgeted	Funding Available & Contribution
<b>Financing</b>		
Seismic Surcharge Revenue AB 1171	2,282.0	2,282.0
Seismic Surcharge Revenue AB 144	2,150.0	2,150.0
Seismic Surcharge Revenue AB 1175	750.0	750.0
BATA Consolidation	820.0	820.0
<b>Subtotal - Financing</b>	<b>6,002.0</b>	<b>6,002.0</b>
<b>Contributions</b>		
Proposition 192	789.0	789.0
San Diego Coronado Toll Bridge Revenue Fund	33.0	33.0
Vincent Thomas Bridge	6.9	6.9
State Highway Account <sup>(1)(2)</sup>	745.0	745.0
Public Transportation Account <sup>(1)(3)</sup>	130.0	130.0
ITIP/SHOPP/Federal Contingency <sup>(4)</sup>	448.0	448.0
Federal Highway Bridge Replacement and Rehabilitation (HBRR)	642.0	642.0
SHA - East Span Demolition	0.0	0.0
SHA - "Efficiency Savings" <sup>(5)</sup>	130.0	130.0
Redirect Spillover	125.0	125.0
Motor Vehicle Account	75.0	75.0
<b>Subtotal - Contribution</b>	<b>3,433.0</b>	<b>3,123.9</b>
<b>Total Funding</b>	<b>9,435.0</b>	<b>9,125.9</b>
<b>Encumbered to Date</b>		<b>8,232.6</b>
<b>Remaining Unallocated</b>		<b>893.3</b>
<b>Expenditures :</b>		
Capital Outlay		6,221.8
State Operations		1,694.1
Antioch and Dumbarton Expenditures by BATA		12.2
<b>Total Expenditures</b>		<b>7,928.1</b>
<b>Encumbrances :</b>		
Capital Outlay		298.8
State Operations		5.7
<b>Total Encumbrances</b>		<b>304.5</b>
<b>Total Expenditures and Encumbrances</b>		<b>8,232.6</b>

1) The California Transportation Commission adopted a new schedule and changed the PTA/SHA split on December 15, 2005.

(2) As of January 1, 2010, seismic retrofitting of Antioch and Dumbarton Bridges became part of the Toll Bridge Seismic Retrofit Program with the passage of AB 1175.

## Summary of the Toll Bridge Oversight Committee (TBPOC) Expenses

Pursuant to Streets and Highways Code Section 30952.1 (d), expenses incurred by Caltrans, BATA, and the California Transportation Commission (CTC) for costs directly related to the duties associated with the TBPOC are to be reimbursed by toll revenues. Table 3 -Toll Bridge Program Oversight Committee Estimated Expenses: July 1, 2005 through September 30, 2013 shows expenses through September 30, 2013 for TBPOC functioning, support, and monthly and quarterly reporting.

**Table 2—CTC Toll Bridge Seismic Retrofit Program Contributions Adopted December 2005**  
Schedule of Contributions to the Toll Bridge Seismic Retrofit Program (\$ Millions)

Source	Description	2005-06 (Actual)	2006-07 (Actual)	2007-08 (Actual)	2008-09 (Actual)	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Actual)	2012-13 (Actual)	2013-14	Total
AB 1171	SHA	290									290
	PTA	80	40								120
	Highway Bridge Replacement and Rehabilitation (HBRR)	100	100	100	42						342
	Contingency				1	99	100	100	148		448
AB 144	SHA*	2	8				53	50	17		130
	Motor Vehicle Account (MVA)	75									75
	Spillover		125								125
	SHA**									300	300
	<b>Total</b>	<b>547</b>	<b>273</b>	<b>100</b>	<b>43</b>	<b>99</b>	<b>153</b>	<b>150</b>	<b>165</b>	<b>300</b>	<b>1830</b>

\* Caltrans Efficiency Savings

\*\* SFOBB East Span Demolition Cost

**Table 3—Toll Bridge Program Oversight Committee**  
Estimated Expenses: July 1, 2005 through September 30, 2013 (\$ Millions)

Agency/Program Activity	Expenses
<b>BATA</b>	<b>2.7</b>
<b>Caltrans</b>	<b>2.8</b>
<b>CTC</b>	<b>2.8</b>
<b>Reporting</b>	<b>5.4</b>
<b>Total Program</b>	<b>13.7</b>

# TOLL BRIDGE SEISMIC RETROFIT PROGRAM

## Quarterly Environmental Compliance Highlights

Overall environmental compliance for the San Francisco-Oakland Bay Bridge East Span Seismic Safety Project (SFOBBESSP) has been a success during the third quarter of 2013. The tasks for the current quarter are focused on mitigation, monitoring, and environmental permitting. Key successes in this quarter are as follows:

The Standard Tracking and Exchange Vehicle for Environmental System (STEVE) is updated regularly with permitting and compliance information for the SFOBB project. Marine-based bird monitoring was conducted weekly from a consultant boat. The goal of this monitoring is to document potential impacts to birds from construction activities. Monitors did not observe any indication that birds were disturbed due to the east span construction activities.

During the bird nesting season (February – August) the Skyway, Self-Anchored Suspension Span, Oakland Touchdown 2 and Yerba Buena Island Transition Structure 1 (YBITS1) and YBITS 2 project areas were surveyed five days a week for nesting birds. The goal of this monitoring is to prevent both impacts to nesting birds and delays to construction. Based on the observations of birds within the project areas adaptive nesting deterrence measures are recommended.

During the double-crested cormorant nesting season (March – August) monitoring was conducted twice a week to evaluate the effectiveness of enticements installed on the new bridge. Bird monitors have observed cormorants loafing amongst the decoys installed on the marine foundations of the new east span.

During the double-crested cormorant nesting season surveys of cormorant nesting activity on the original bridge were performed twice a month. This consists of one survey from the Skyway and one survey from a boat. The goal of this monitoring is to expand our understanding of the timing and location of cormorant nesting. Results of this monitoring will help us develop effective strategies for managing these birds during bridge dismantling. Monitoring results support the assumption that early nesting is centered around Pier E9 and that the colony expands from the center as the season progresses.

In early July, the SFOBB project's bird biologists observed a pair of house finches exhibiting nesting behavior at the Acrow Bridge prior to its scheduled removal. Following this observation the environmental team worked closely with the contractor to undertake an intensive effort to deter house finches from nesting on the Acrow Bridge prior to its removal on July 13, 2013.

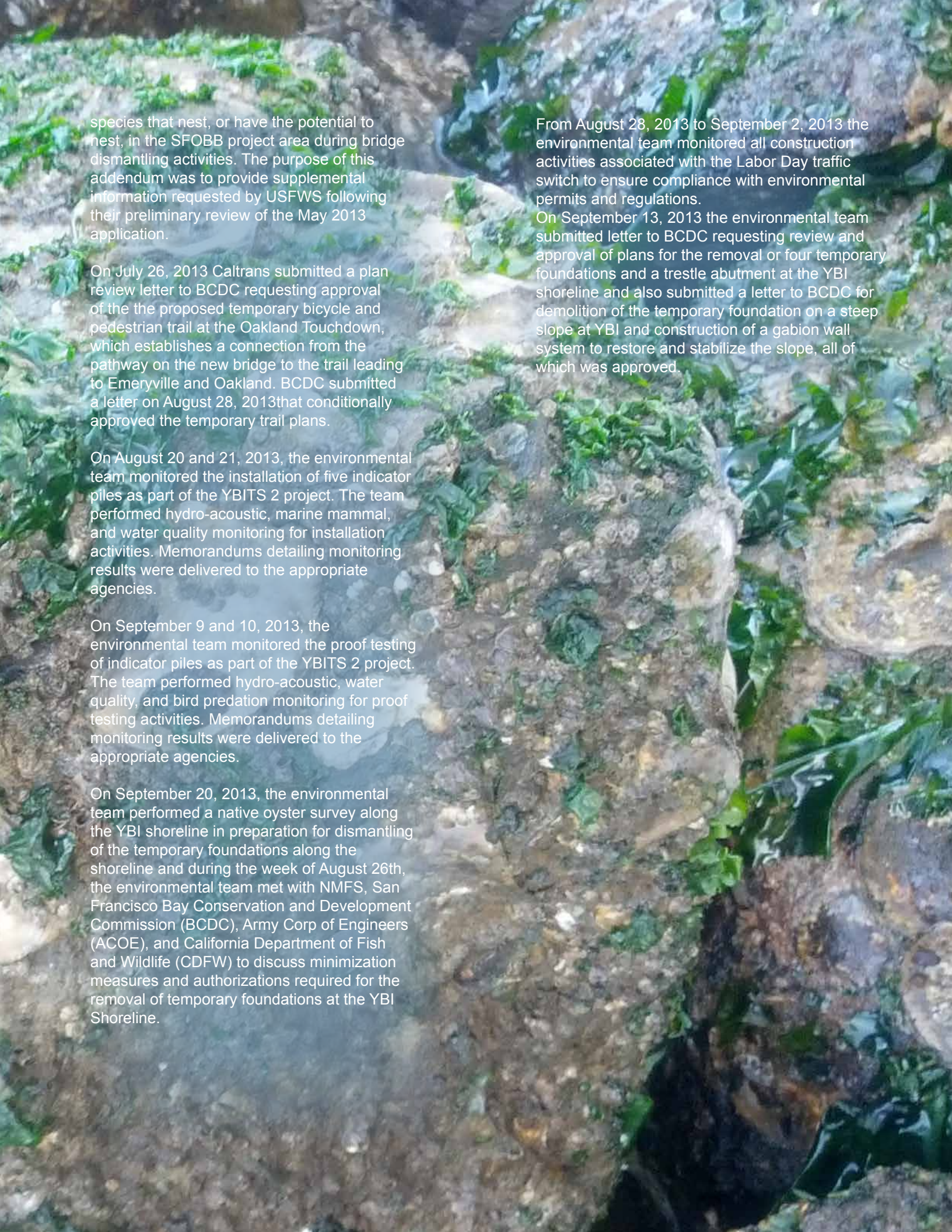
On August 8, 2013 Caltrans biologists climbed down the E3, E4, and E9 tower legs of the original east span to conduct a cormorant nesting survey. Throughout the third quarter of 2013 the environmental team coordinated weekly focus meetings to establish a nesting bird deterrence strategy for upcoming bridge dismantling work. SFOBB environmental compliance and storm water pollution prevention plan (SWPPP) inspections were conducted weekly at all active project sites. The project team continues to work closely with construction to ensure compliance with environmental permits and regulations and to improve best management practices.

The environmental team worked closely with design and construction to prepare environmental Special Provisions for the 504/288 bridge dismantling contract, met with Caltrans engineers to discuss comments on the SFOBB Project Pier E3 demonstration program advanced planning study and attended quarterly risk management meetings for the SFOBB corridor, YBITS 1 contract, OTD2 contract, YBITS 2 contract, and 504/288 contract.

The environmental team began work to amend project permits to allow the YBITS 2 contractor to utilize 42-inch pipe piles in the construction of their temporary falsework being used to support cantilever span dismantling.

On July 1, 2013 Caltrans completed the transfer of \$1.5 million (plus accrued interest) to the National Marine Fisheries Service (NMFS) for a comprehensive off-site eelgrass mitigation program and on July 1 & 2, 2013 a project wide eelgrass survey was performed.

On July 8, 2013 Caltrans submitted an addendum to the miscellaneous permit application submitted to USFWS on May 22, 2013. In the May 2013 application, Caltrans requested authorization to remove occupied nests and nestlings of bird



species that nest, or have the potential to nest, in the SFOBB project area during bridge dismantling activities. The purpose of this addendum was to provide supplemental information requested by USFWS following their preliminary review of the May 2013 application.

On July 26, 2013 Caltrans submitted a plan review letter to BCDC requesting approval of the the proposed temporary bicycle and pedestrian trail at the Oakland Touchdown, which establishes a connection from the pathway on the new bridge to the trail leading to Emeryville and Oakland. BCDC submitted a letter on August 28, 2013 that conditionally approved the temporary trail plans.

On August 20 and 21, 2013, the environmental team monitored the installation of five indicator piles as part of the YBITS 2 project. The team performed hydro-acoustic, marine mammal, and water quality monitoring for installation activities. Memorandums detailing monitoring results were delivered to the appropriate agencies.

On September 9 and 10, 2013, the environmental team monitored the proof testing of indicator piles as part of the YBITS 2 project. The team performed hydro-acoustic, water quality, and bird predation monitoring for proof testing activities. Memorandums detailing monitoring results were delivered to the appropriate agencies.

On September 20, 2013, the environmental team performed a native oyster survey along the YBI shoreline in preparation for dismantling of the temporary foundations along the shoreline and during the week of August 26th, the environmental team met with NMFS, San Francisco Bay Conservation and Development Commission (BCDC), Army Corp of Engineers (ACOE), and California Department of Fish and Wildlife (CDFW) to discuss minimization measures and authorizations required for the removal of temporary foundations at the YBI Shoreline.

From August 28, 2013 to September 2, 2013 the environmental team monitored all construction activities associated with the Labor Day traffic switch to ensure compliance with environmental permits and regulations.

On September 13, 2013 the environmental team submitted letter to BCDC requesting review and approval of plans for the removal of four temporary foundations and a trestle abutment at the YBI shoreline and also submitted a letter to BCDC for demolition of the temporary foundation on a steep slope at YBI and construction of a gabion wall system to restore and stabilize the slope, all of which was approved.



Coronado Bridge, San Diego



## REGIONAL MEASURE 1 TOLL BRIDGE PROGRAM

## REGIONAL MEASURE 1 PROGRAM

### Completed Projects

In November 1988, Bay Area voters approved Regional Measure 1 (RM 1), which authorized a standard auto toll of \$1 for all seven state-owned Bay Area toll bridges to be used to reduce congestion in the bridge corridor.

#### Richmond Parkway Construction Project

**Project Status: Completed 2001**

The final connections to the Richmond Parkway from Interstate 580 near the Richmond-San Rafael Bridge were completed in May 2001.

#### San Mateo-Hayward Bridge Widening Project

**Project Status: Completed 2003**

This project expanded the low-rise concrete trestle section of the San Mateo-Hayward Bridge to allow for three lanes in each direction to match the existing configuration of the high-rise steel section of the bridge.

#### New Alfred Zampa Memorial (Carquinez) Bridge Project

**Project Status: Completed 2003**

The new western span of the Carquinez Bridge, which replaced the original 1927 span, is a twin-towered suspension bridge with three mixed-flow lanes, a new carpool lane, shoulders and a bicycle/pedestrian pathway.

#### Bayfront Expressway (State Route 84) Widening Project

**Project Status: Completed 2004**

This project expanded and improved the roadway from the Dumbarton Bridge touchdown to the US 101/ Marsh Road interchange by adding additional lanes and turn pockets and improving bicycle/pedestrian access in the area.

#### Richmond-San Rafael Bridge Rehabilitation Projects

**Project Status: Completed 2006**

Three major rehabilitation projects for the Richmond-San Rafael Bridge were completed. In 2001, the final connections to the Richmond Parkway were completed. In 2005, seismic retrofit, trestle and fender system replacement work was completed. In 2006, the bridge was resurfaced along with deck joint repairs.



Widening of the San Mateo-Hayward Bridge Trestle on left



New Alfred Zampa Memorial (Carquinez) Bridge Soon after Opening to Traffic, with Crockett Interchange Still under Construction



New Richmond-San Rafael Bridge West Approach Trestle under Construction

## Benicia-Martinez Bridge Project

### Project Status: **Completed 2007**

The new Congressman George Miller Bridge opened to traffic in August 2007, taking its place alongside the existing 1962 Benicia-Martinez Bridge, which is named for Congressman Miller's father, the late George Miller, Jr. The new bridge carries five lanes of northbound Interstate 680 traffic, while the existing bridge is being upgraded to carry four lanes of southbound traffic and a new bicycle/pedestrian pathway.



The New Congressman George Miller Bridge (New Benicia-Martinez Bridge)

## Benicia-Martinez Bridge Rehabilitation Project

### Project Status: **Completed 2009**

A two-year project to rehabilitate and reconfigure the original Benicia-Martinez Bridge began shortly after the opening of the new Congressman George Miller Bridge. The existing 1.2-mile roadway surface on the steel deck truss bridge was modified to carry four lanes of southbound traffic (one more than before) - with shoulders on both sides - plus a bicycle/pedestrian path on the west side of the span that connects to Park Road in Benicia and to Marina Vista Boulevard in Martinez. Reconstruction of the east side of the bridge and approaches was completed in August 2008. Reconstruction of the west side of the bridge and its approaches and construction of the bicycle/pedestrian pathway were completed in August 2009.



Benicia-Martinez Bridge Bicycle/Pedestrian Path

## Interstate 880/State Route 92

### Project Status: **Completed 2011**

This corridor was consistently one of the Bay Area's most congested during the evening commute. This was due in part to the lane merging and weaving that was required by the then-existing cloverleaf interchange. The new interchange features direct freeway-to-freeway connector ramps that now increase traffic capacity and improve overall safety and traffic operations in the area. With the new direct-connector ramps, drivers coming off of the San Mateo-Hayward Bridge can access Interstate 880 without having to compete with traffic headed onto east Route 92 from south Interstate 880.



Aerial View of Completed 880/92 Interchange Project



San Francisco-Oakland Bay Bridge Self-Anchored Suspension Span Cutting Rebar for lower Saddle Installation at Shearkey S1



## APPENDICES

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## Appendix A-1: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2013 (\$ Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (09/2013) e = c + d	Cost to Date (07/2013) f	Cost Forecast (09/2013) g	At- Completion Variance h = g - e
<b>SFOBB East Span Replacement Project</b>						
Capital Outlay Support	959.3	262.3	1,221.6	1,154.1	1,287.8	66.2
Capital Outlay Construction	4,492.2	571.5	5,063.7	4,432.2	5,138.1	74.4
Other Budgeted Capital	35.1	(32.8)	2.3	0.7	7.7	5.4
<b>Total</b>	<b>5,486.6</b>	<b>801.0</b>	<b>6,287.6</b>	<b>5,587.0</b>	<b>6,433.6</b>	<b>146.0</b>
<b>SFOBB West Approach Replacement</b>						
Capital Outlay Support	120.0	(1.0)	119.0	119.3	119.3	0.3
Capital Outlay Construction	309.0	41.7	350.7	332.0	338.1	(12.6)
<b>Total</b>	<b>429.0</b>	<b>40.7</b>	<b>469.7</b>	<b>451.3</b>	<b>457.4</b>	<b>(12.3)</b>
<b>SFOBB West Span Retrofit</b>						
Capital Outlay Support	75.0	(0.2)	74.8	74.9	74.8	-
Capital Outlay Construction	232.9	(5.5)	227.4	227.4	227.4	-
<b>Total</b>	<b>307.9</b>	<b>(5.7)</b>	<b>302.2</b>	<b>302.3</b>	<b>302.2</b>	<b>-</b>
<b>Richmond-San Rafael Bridge Retrofit</b>						
Capital Outlay Support	134.0	(7.0)	127.0	126.8	127.0	-
Capital Outlay Construction	780.0	(90.5)	689.5	667.5	689.5	-
<b>Total</b>	<b>914.0</b>	<b>(97.5)</b>	<b>816.5</b>	<b>794.3</b>	<b>816.5</b>	<b>-</b>
<b>Benicia-Martinez Bridge Retrofit</b>						
Capital Outlay Support	38.1	-	38.1	38.1	38.1	-
Capital Outlay Construction	139.7	-	139.7	139.7	139.7	-
<b>Total</b>	<b>177.8</b>	<b>-</b>	<b>177.8</b>	<b>177.8</b>	<b>177.8</b>	<b>-</b>
<b>Carquinez Bridge Retrofit</b>						
Capital Outlay Support	28.7	0.1	28.8	28.8	28.8	-
Capital Outlay Construction	85.5	(0.1)	85.4	85.4	85.4	-
<b>Total</b>	<b>114.2</b>	<b>-</b>	<b>114.2</b>	<b>114.2</b>	<b>114.2</b>	<b>-</b>
<b>San Mateo-Hayward Retrofit</b>						
Capital Outlay Support	28.1	-	28.1	28.1	28.1	-
Capital Outlay Construction	135.4	(0.1)	135.3	135.3	135.3	-
<b>Total</b>	<b>163.5</b>	<b>(0.1)</b>	<b>163.4</b>	<b>163.4</b>	<b>163.4</b>	<b>-</b>
<b>Vincent Thomas Bridge Retrofit (Los Angeles)</b>						
Capital Outlay Support	16.4	-	16.4	16.4	16.4	-
Capital Outlay Construction	42.1	(0.1)	42.0	42.0	42.0	-
<b>Total</b>	<b>58.5</b>	<b>(0.1)</b>	<b>58.4</b>	<b>58.4</b>	<b>58.4</b>	<b>-</b>
<b>San Diego-Coronado Bridge Retrofit</b>						
Capital Outlay Support	33.5	(0.3)	33.2	33.2	33.2	-
Capital Outlay Construction	70.0	(0.6)	69.4	69.4	69.4	-
<b>Total</b>	<b>103.5</b>	<b>(0.9)</b>	<b>102.6</b>	<b>102.6</b>	<b>102.6</b>	<b>-</b>

## Appendix A-1: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2013 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (09/2013)	Cost to Date (07/2013)	Cost Forecast (09/2013)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>Antioch Bridge</b>						
Capital Outlay Support	-	31.0	31.0	17.3	23.8	(7.2)
Capital Outlay Support by BATA				6.2		
Capital Outlay Construction	-	51.0	51.0	47.0	50.3	(0.7)
Total	-	82.0	82.0	70.5	74.1	(7.9)
<b>Dumbarton Bridge</b>						
Capital Outlay Support	-	56.0	56.0	37.8	45.4	(10.6)
Capital Outlay Support by BATA				6.0		
Capital Outlay Construction	-	92.7	92.7	63.4	68.2	(24.5)
Total	-	148.7	148.7	107.2	113.6	(35.1)
Subtotal Capital Outlay Support	1,433.1	340.9	1,774.0	1,687.0	1,822.7	48.7
Subtotal Capital Outlay	6,286.8	660.0	6,946.8	6,241.3	6,983.4	36.6
Subtotal Other Budgeted Capital	35.1	(32.8)	2.3	0.7	7.7	5.4
Miscellaneous Program Costs	30.0	-	30.0	25.5	30.0	-
Subtotal Toll Bridge Seismic Retrofit Program	7,785.0	968.1	8,753.1	7,954.5	8,843.8	90.7
Net Programmatic Risks*	-	-	-	-	70.7	70.7
Program Contingency	900.0	(571.1)	328.9	-	167.5	(161.4)
Total Toll Bridge Seismic Retrofit Program <sup>1</sup>	8,685.0	397.0	9,082.0	7,954.5	9,082.0	-

<sup>1</sup> Figures may not sum up to totals due to rounding effects.

## Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2013(\$ Millions)

Bridge	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and encumbrances as of 09/2013 see Note (1)	Estimated costs not yet spent or encumbered as of 09/2013	Total Forecast as of 09/2013
a	b	c	d	e	f = d + e
<b>Other Completed Projects</b>					
Capital Outlay Support	144.9	144.6	144.6	-	144.6
Capital Outlay	472.6	471.9	472.3	(0.5)	471.8
<b>Total</b>	<b>617.5</b>	<b>616.5</b>	<b>616.9</b>	<b>(0.5)</b>	<b>616.4</b>
<b>Richmond-San Rafael</b>					
Capital Outlay Support	134.0	127.0	126.8	0.2	127.0
Capital Outlay	698.0	689.5	667.5	22.0	689.5
Project Reserves	82.0	-	-	-	-
<b>Total</b>	<b>914.0</b>	<b>816.5</b>	<b>794.3</b>	<b>22.2</b>	<b>816.5</b>
<b>West Span Retrofit</b>					
Capital Outlay Support	75.0	74.8	74.9	(0.1)	74.8
Capital Outlay	232.9	227.4	227.4	-	227.4
<b>Total</b>	<b>307.9</b>	<b>302.2</b>	<b>302.3</b>	<b>(0.1)</b>	<b>302.2</b>
<b>West Approach</b>					
Capital Outlay Support	120.0	119.0	119.3	-	119.3
Capital Outlay	309.0	350.7	332.6	5.5	338.1
<b>Total</b>	<b>429.0</b>	<b>469.7</b>	<b>451.9</b>	<b>5.5</b>	<b>457.4</b>
<b>SFOBB East Span - Skyway</b>					
Capital Outlay Support	197.0	181.2	181.2	-	181.2
Capital Outlay	1,293.0	1,237.2	1,237.3	(0.1)	1,237.2
<b>Total</b>	<b>1,490.0</b>	<b>1,418.4</b>	<b>1,418.5</b>	<b>(0.1)</b>	<b>1,418.4</b>
<b>SFOBB East Span - SAS - Superstructure</b>					
Capital Outlay Support	214.6	419.0	442.5	37.3	479.8
Capital Outlay	1,753.7	2,046.8	1,963.6	117.7	2,081.3
<b>Total</b>	<b>1,968.3</b>	<b>2,465.8</b>	<b>2,406.1</b>	<b>155.0</b>	<b>2,561.1</b>
<b>SFOBB East Span - SAS - Foundations</b>					
Capital Outlay Support	62.5	37.6	37.6	-	37.6
Capital Outlay	339.9	301.3	301.3	3.8	305.1
<b>Total</b>	<b>402.4</b>	<b>338.9</b>	<b>338.9</b>	<b>3.8</b>	<b>342.7</b>
<b>Small YBI Projects</b>					
Capital Outlay Support	10.6	10.2	10.2	0.4	10.6
Capital Outlay	15.6	15.2	15.2	0.5	15.7
<b>Total</b>	<b>26.2</b>	<b>25.4</b>	<b>25.4</b>	<b>0.9</b>	<b>26.3</b>
<b>YBI Detour</b>					
Capital Outlay Support	29.5	87.7	88.8	(1.1)	87.7
Capital Outlay	131.9	466.1	466.2	7.1	473.3
<b>Total</b>	<b>161.4</b>	<b>553.8</b>	<b>555.0</b>	<b>6.0</b>	<b>561.0</b>
<b>YBI- Transition Structures</b>					
Capital Outlay Support	78.7	106.4	101.4	12.2	113.6
Capital Outlay	299.4	295.4	332.9	(17.8)	315.1
<b>Total</b>	<b>378.1</b>	<b>401.8</b>	<b>434.3</b>	<b>(5.6)</b>	<b>428.7</b>

## Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2013 (\$ Millions) Cont.

Contract	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and encumbrances as of 09/2013 see Note (1)	Estimated costs not yet spent or encumbered as of 09/2013	Total Forecast as of 09/2013
a	b	c	d	e	f = d + e
<b>Oakland Touchdown</b>					
Capital Outlay Support	74.4	112.9	108.3	14.9	123.2
Capital Outlay	283.8	323.7	271.9	58.2	330.1
<b>Total</b>	<b>358.2</b>	<b>436.6</b>	<b>380.2</b>	<b>73.1</b>	<b>453.3</b>
<b>East Span Other Small Projects</b>					
Capital Outlay Support	212.3	206.6	197.9	8.7	206.6
Capital Outlay	170.8	141.3	117.1	37.6	154.7
<b>Total</b>	<b>383.1</b>	<b>347.9</b>	<b>315.0</b>	<b>46.3</b>	<b>361.3</b>
<b>Existing Bridge Demolition</b>					
Capital Outlay Support	79.7	59.9	5.5	42.0	47.5
Capital Outlay	239.2	239.1	-	233.3	233.3
<b>Total</b>	<b>318.9</b>	<b>299.0</b>	<b>5.5</b>	<b>275.3</b>	<b>280.8</b>
<b>Antioch Bridge</b>					
Capital Outlay Support	-	31.0	17.3	0.3	17.6
Capital Outlay Support by BATA			6.2	-	6.2
Capital Outlay	-	51.0	47.0	3.3	50.3
<b>Total</b>	<b>-</b>	<b>82.0</b>	<b>70.5</b>	<b>3.6</b>	<b>74.1</b>
<b>Dumbarton Bridge</b>					
Capital Outlay Support	-	56.0	37.9	1.5	39.4
Capital Outlay Support by BATA			6.0	-	6.0
Capital Outlay	-	92.7	68.3	(0.1)	68.2
<b>Total</b>	<b>-</b>	<b>148.7</b>	<b>112.2</b>	<b>1.4</b>	<b>113.6</b>
Miscellaneous Program Costs	30.0	30.0	25.5	4.5	30.0
<b>Total Capital Outlay Support</b>	<b>1,463.2</b>	<b>1,803.9</b>	<b>1,731.9</b>	<b>120.8</b>	<b>1,852.7</b>
<b>Total Capital Outlay</b>	<b>6,321.8</b>	<b>6,949.2</b>	<b>6,520.6</b>	<b>470.5</b>	<b>6,991.1</b>
<b>Program Total <sup>1</sup></b>	<b>7,785.0</b>	<b>8,753.1</b>	<b>8,252.5</b>	<b>591.3</b>	<b>8,843.8</b>

(1). Funds allocated to project or contract for Capital Outlay and Support needs includes Capital Outlay Support total allocation for FY 06/07.

(2). BSA provided a distribution of program contingency in December 2004 based in Bechtel Infrastructure Corporation input.

This Column is subject to revision upon completion of Department's risk assessment update.

(3) Total Capital Outlay Support includes program indirect costs.

<sup>1</sup> Figures may not sum up to totals due to rounding effects.

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2013 (\$ Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (09/2013) e = c + d	Cost to Date (07/2013) f	Cost Forecast (09/2013) g	At- Completion Variance h = g - e
San Francisco-Oakland Bay Bridge East Span Replacement Project						
East Span - SAS Superstructure						
Capital Outlay Support	214.6	204.4	419.0	431.7	479.8	60.8
Capital Outlay Construction	1,753.7	293.1	2,046.8	1,837.1	2,081.3	34.5
Total	1,968.3	497.5	2,465.8	2,268.8	2,561.1	95.3
SAS W2 Foundations						
Capital Outlay Support	10.0	(0.8)	9.2	9.2	9.2	-
Capital Outlay Construction	26.4	0.1	26.5	26.5	26.5	-
Total	36.4	(0.7)	35.7	35.7	35.7	-
YBI South/South Detour						
Capital Outlay Support	29.4	58.3	87.7	87.9	87.7	-
Capital Outlay Construction	131.9	334.2	466.1	466.1	473.3	7.2
Total	161.3	392.5	553.8	554.0	561.0	7.2
East Span - Skyway						
Capital Outlay Support	197.0	(15.8)	181.2	181.2	181.2	-
Capital Outlay Construction	1,293.0	(55.8)	1,237.2	1,237.3	1,237.2	-
Total	1,490.0	(71.6)	1,418.4	1,418.5	1,418.4	-
East Span - SAS E2/T1 Foundations						
Capital Outlay Support	52.5	(24.1)	28.4	28.4	28.4	-
Capital Outlay Construction	313.5	(38.7)	274.8	274.8	278.6	3.8
Total	366.0	(62.8)	303.2	303.2	307.0	3.8
YBI Transition Structures (see notes below)						
Capital Outlay Support	78.7	27.7	106.4	97.9	113.6	7.2
Capital Outlay Construction	299.3	(3.9)	295.4	197.0	315.1	19.7
Total	378.0	23.8	401.8	294.9	428.7	26.9
* YBI- Transition Structures						
Capital Outlay Support			16.4	16.4	16.4	-
Capital Outlay Construction			-	-	-	-
Total			16.4	16.4	16.4	-
* YBI- Transition Structures Contract No. 1						
Capital Outlay Support			57.0	62.8	64.0	7.0
Capital Outlay Construction			199.7	186.1	214.1	14.4
Total			256.7	248.9	278.1	21.4
* YBI- Transition Structures Contract No. 2						
Capital Outlay Support			32.0	18.6	32.2	0.2
Capital Outlay Construction			92.4	10.9	97.7	5.3
Total			124.4	29.6	129.9	5.5
* YBI- Transition Structures Contract No. 3 Landscape						
Capital Outlay Support			1.0	-	1.0	-
Capital Outlay Construction			3.3	-	3.3	-
Total			4.3	-	4.3	-

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2013 (\$ Millions) Cont.

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (09/2013) e = c + d	Cost to Date (07/2013) f	Cost Forecast (09/2013) g	At- Completion Variance h = g - e
<b>Oakland Touchdown (see notes below)</b>						
Capital Outlay Support	74.4	38.5	112.9	104.2	123.2	10.3
Capital Outlay Construction	283.8	39.9	323.7	261.3	330.1	6.4
<b>Total</b>	<b>358.2</b>	<b>78.4</b>	<b>436.6</b>	<b>365.5</b>	<b>453.3</b>	<b>16.7</b>
<b>* OTD Prior-to-Split Costs</b>						
Capital Outlay Support			21.7	20.0	21.7	-
Capital Outlay Construction			-	-	-	-
<b>Total</b>			<b>21.7</b>	<b>20.0</b>	<b>21.7</b>	<b>-</b>
<b>* OTD Submarine Cable(1)</b>						
Capital Outlay Support			0.9	0.9	0.9	-
Capital Outlay Construction			5.7	5.7	9.6	3.9
<b>Total</b>			<b>6.6</b>	<b>6.6</b>	<b>10.5</b>	<b>3.9</b>
<b>* OTD No. 1 (Westbound)</b>						
Capital Outlay Support			51.3	51.2	51.3	-
Capital Outlay Construction			205.0	204.8	203.3	(1.7)
<b>Total</b>			<b>256.3</b>	<b>256.0</b>	<b>254.6</b>	<b>(1.7)</b>
<b>* OTD No. 2 (Eastbound)</b>						
Capital Outlay Support			22.5	24.3	40.6	18.1
Capital Outlay Construction			62.0	23.1	73.4	11.4
<b>Total</b>			<b>84.5</b>	<b>47.4</b>	<b>114.0</b>	<b>29.5</b>
<b>* OTD Touchdown 2 Detour(2)</b>						
Capital Outlay Support			15.0	7.1	7.2	(7.8)
Capital Outlay Construction			51.0	27.7	43.8	(7.2)
<b>Total</b>			<b>66.0</b>	<b>34.8</b>	<b>51.0</b>	<b>(15.0)</b>
<b>* OTD Electrical Systems</b>						
Capital Outlay Support			1.5	0.8	1.5	-
Capital Outlay Construction			-	-	-	-
<b>Total</b>			<b>1.5</b>	<b>0.8</b>	<b>1.5</b>	<b>-</b>
<b>Existing Bridge Demolition</b>						
Capital Outlay Support	79.7	(19.8)	59.9	5.5	47.5	(12.4)
Capital Outlay Construction	239.2	(0.1)	239.1	-	233.3	(5.8)
<b>Total</b>	<b>318.9</b>	<b>(19.9)</b>	<b>299.0</b>	<b>5.5</b>	<b>280.8</b>	<b>(18.2)</b>
<b>* Bridge Demolition Prior-to-Split Cost</b>						
Capital Outlay Support			-	3.9	-	
Capital Outlay Construction			-	-	-	
<b>Total</b>			<b>-</b>	<b>3.9</b>	<b>-</b>	
<b>* Cantilever Section</b>						
Capital Outlay Support			-	0.2	17.6	
Capital Outlay Construction			-	-	59.9	
<b>Total</b>			<b>-</b>	<b>0.2</b>	<b>77.5</b>	
<b>* 504/288 Sections</b>						
Capital Outlay Support			-	1.2	13.9	
Capital Outlay Construction			-	-	88.4	
<b>Total</b>			<b>-</b>	<b>1.2</b>	<b>102.3</b>	
<b>*Marine foundations</b>						
Capital Outlay Support			-	0.2	16.0	
Capital Outlay Construction			-	-	85.0	
<b>Total</b>			<b>-</b>	<b>0.2</b>	<b>101.0</b>	

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through September 30, 2013 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (09/2013) e = c + d	Cost to Date (07/2013)	Cost Forecast (09/2013)	At-Completion Variance h = g - e
a	c	d	e = c + d	f	g	h = g - e
<b>YBI/SAS Archeology</b>						
Capital Outlay Support	1.1	-	1.1	1.1	1.1	-
Capital Outlay Construction	1.1	-	1.1	1.1	1.1	-
<b>Total</b>	<b>2.2</b>	<b>-</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>	<b>-</b>
<b>YBI - USCG Road Relocation</b>						
Capital Outlay Support	3.0	(0.3)	2.7	2.7	3.0	0.3
Capital Outlay Construction	3.0	(0.2)	2.8	2.8	3.0	0.2
<b>Total</b>	<b>6.0</b>	<b>(0.5)</b>	<b>5.5</b>	<b>5.5</b>	<b>6.0</b>	<b>0.5</b>
<b>YBI - Substation and Viaduct</b>						
Capital Outlay Support	6.5	(0.1)	6.4	6.4	6.5	0.1
Capital Outlay Construction	11.6	(0.3)	11.3	11.3	11.6	0.3
<b>Total</b>	<b>18.1</b>	<b>(0.4)</b>	<b>17.7</b>	<b>17.7</b>	<b>18.1</b>	<b>0.4</b>
<b>Oakland Geofill</b>						
Capital Outlay Support	2.5	0.1	2.6	2.5	2.5	(0.1)
Capital Outlay Construction	8.2	-	8.2	8.2	8.2	-
<b>Total</b>	<b>10.7</b>	<b>0.1</b>	<b>10.8</b>	<b>10.7</b>	<b>10.7</b>	<b>(0.1)</b>
<b>Pile Installation Demonstration Project</b>						
Capital Outlay Support	1.8	-	1.8	1.8	1.8	-
Capital Outlay Construction	9.3	(0.1)	9.2	9.3	9.3	-
<b>Total</b>	<b>11.1</b>	<b>(0.1)</b>	<b>11.0</b>	<b>11.1</b>	<b>11.1</b>	<b>-</b>
<b>Stormwater Treatment Measures</b>						
Capital Outlay Support	6.0	2.2	8.2	8.2	8.2	-
Capital Outlay Construction	15.0	3.3	18.3	16.9	18.3	-
<b>Total</b>	<b>21.0</b>	<b>5.5</b>	<b>26.5</b>	<b>25.1</b>	<b>26.5</b>	<b>-</b>
<b>Right-of-Way and Environmental Mitigation</b>						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay & Right-of-Way	72.4	-	72.4	51.7	80.4	8.0
<b>Total</b>	<b>72.4</b>	<b>-</b>	<b>72.4</b>	<b>51.7</b>	<b>80.4</b>	<b>8.0</b>
<b>Sunk Cost - Existing East Span Retrofit</b>						
Capital Outlay Support	39.5	-	39.5	39.5	39.5	-
Capital Outlay Construction	30.8	-	30.8	30.8	30.8	-
<b>Total</b>	<b>70.3</b>	<b>-</b>	<b>70.3</b>	<b>70.3</b>	<b>70.3</b>	<b>-</b>
<b>Other Capital Outlay Support</b>						
Environmental Phase	97.7	0.1	97.8	97.8	97.7	(0.1)
Pre-Split Project Expenditures	44.9	-	44.9	44.9	44.9	-
Non-Project Specific Costs	20.0	(8.0)	12.0	3.2	12.0	-
<b>Total</b>	<b>162.6</b>	<b>(7.9)</b>	<b>154.7</b>	<b>145.9</b>	<b>154.6</b>	<b>(0.1)</b>
<b>Subtotal Capital Outlay Support</b>	<b>959.3</b>	<b>262.3</b>	<b>1,221.6</b>	<b>1,154.1</b>	<b>1,287.8</b>	<b>66.2</b>
<b>Subtotal Capital Outlay Construction</b>	<b>4,492.2</b>	<b>571.5</b>	<b>5,063.7</b>	<b>4,432.2</b>	<b>5,138.1</b>	<b>74.4</b>
<b>Other Budgeted Capital</b>	<b>35.1</b>	<b>(32.8)</b>	<b>2.3</b>	<b>0.7</b>	<b>7.7</b>	<b>5.4</b>
						<b>-</b>
<b>Total SFOBB East Span Replacement Project</b>	<b>5,486.6</b>	<b>801.0</b>	<b>6,287.6</b>	<b>5,587.0</b>	<b>6,433.6</b>	<b>146.0</b>

<sup>1</sup> Figures may not sum up to totals due to rounding effects.

## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (09/2013)	Cost to Date (07/2013)	Cost Forecast (09/2013)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>New Benicia-Martinez Bridge Project</b>						
<b>New Bridge</b>						
Capital Outlay Support						
BATA Funding	84.9	7.2	92.1	92.0	92.1	-
Non-BATA Funding	-	0.1	0.1	0.1	0.1	-
Subtotal	84.9	7.3	92.2	92.1	92.2	-
Capital Outlay Construction			-			-
BATA Funding	661.9	94.6	756.5	753.7	756.5	-
Non-BATA Funding	10.1	-	10.1	10.1	10.1	-
Subtotal	672.0	94.6	766.6	763.8	766.6	-
<b>Total</b>	<b>756.9</b>	<b>101.9</b>	<b>858.8</b>	<b>855.9</b>	<b>858.8</b>	<b>-</b>
<b>I-680/I-780 Interchange Reconstruction</b>						
Capital Outlay Support						
BATA Funding	24.9	5.2	30.1	30.1	30.1	-
Non-BATA Funding	1.4	5.2	6.6	6.3	6.6	-
Subtotal	26.3	10.4	36.7	36.4	36.7	-
Capital Outlay Construction						
BATA Funding	54.7	26.9	81.6	77.1	81.6	-
Non-BATA Funding	21.6	-	21.6	21.7	21.7	0.1
Subtotal	76.3	26.9	103.2	98.8	103.3	0.1
<b>Total</b>	<b>102.6</b>	<b>37.3</b>	<b>139.9</b>	<b>135.2</b>	<b>140.0</b>	<b>0.1</b>
<b>I-680/Marina Vista Interchange Reconstruction</b>						
Capital Outlay Support	18.3	1.9	20.2	20.2	20.2	-
Capital Outlay Construction	51.5	4.9	56.4	56.1	56.4	-
<b>Total</b>	<b>69.8</b>	<b>6.8</b>	<b>76.6</b>	<b>76.3</b>	<b>76.6</b>	<b>-</b>
<b>New Toll Plaza and Administration Building</b>						
Capital Outlay Support	11.9	3.8	15.7	15.7	15.7	-
Capital Outlay Construction	24.3	2.0	26.3	25.1	26.3	-
<b>Total</b>	<b>36.2</b>	<b>5.8</b>	<b>42.0</b>	<b>40.8</b>	<b>42.0</b>	<b>-</b>
<b>Existing Bridge &amp; Interchange Modifications</b>						
Capital Outlay Support						
BATA Funding	4.3	13.7	18.0	18.0	18.0	-
Non-BATA Funding	-	0.9	0.9	0.8	0.9	-
Subtotal	4.3	14.6	18.9	18.8	18.9	-
Capital Outlay Construction						
BATA Funding	17.2	32.8	50.0	37.2	50.0	-
Non-BATA Funding	-	9.5	9.5	-	9.5	-
Subtotal	17.2	42.3	59.5	37.2	59.5	-
<b>Total</b>	<b>21.5</b>	<b>56.9</b>	<b>78.4</b>	<b>56.0</b>	<b>78.4</b>	<b>-</b>
<b>Other Contracts</b>						
Capital Outlay Support	11.4	(0.9)	10.5	9.7	10.5	-
Capital Outlay Construction	20.3	3.3	23.6	18.6	23.6	-
Capital Outlay Right-of-Way	20.4	(0.1)	20.3	17.0	20.3	-
<b>Total</b>	<b>52.1</b>	<b>2.3</b>	<b>54.4</b>	<b>45.3</b>	<b>54.4</b>	<b>-</b>

## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (09/2013)	Cost to Date (07/2013)	Cost Forecast (09/2013)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
New Benicia-Martinez Bridge Project continued...						
Subtotal BATA Capital Outlay Support	155.7	30.9	186.6	185.7	186.6	-
Subtotal BATA Capital Outlay Construction	97.5	16.4	113.9	107.0	113.9	-
Subtotal Capital Outlay Right-of-Way	158.1	22.0	180.1	165.9	180.2	0.1
Subtotal Non-BATA Capital Outlay Support	52.1	2.3	54.4	45.3	54.4	-
Subtotal Non-BATA Capital Outlay Construction	115.5	32.3	147.8	147.3	147.8	-
Project Reserves	765.5	163.8	929.3	899.8	929.4	0.1
Total New Benicia-Martinez Bridge Project						
Notes:	1,059.9	212.6	1,272.5	1,209.5	1,272.5	-
	Includes EAs 00601_,00603_,00605_,00606_,00608_,00609_,0060A_,0060C_,0060E_,0060F_,0060G_,0060H_, and all Project Right-of-Way					
Carquinez Bridge Replacement Project						
New Bridge						
Capital Outlay Support	60.5	(0.3)	60.2	60.2	60.2	-
Capital Outlay Construction	253.3	2.7	256.0	255.9	256.0	-
Total	313.8	2.4	316.2	316.1	316.2	-
Crockett Interchange Reconstruction						
Capital Outlay Support	32.0	(0.1)	31.9	31.9	31.9	-
Capital Outlay Construction	73.9	(1.9)	72.0	71.9	72.0	-
Total	105.9	(2.0)	103.9	103.8	103.9	-
Existing 1927 Bridge Demolition						
Capital Outlay Support	16.1	(0.3)	15.8	15.8	15.8	-
Capital Outlay Construction	35.2	-	35.2	35.1	35.2	-
Total	51.3	(0.3)	51.0	50.9	51.0	-
Other Contracts						
Capital Outlay Support	15.8	0.9	16.7	16.5	16.7	-
Capital Outlay Construction	18.8	(1.2)	17.6	16.5	17.6	-
Capital Outlay Right-of-Way	10.5	(0.1)	10.4	9.9	10.4	-
Total	45.1	(0.4)	44.7	42.9	44.7	-
Subtotal BATA Capital Outlay Support						
Subtotal BATA Capital Outlay Construction	124.4	0.2	124.6	124.4	124.6	-
Subtotal Capital Outlay Right-of-Way	381.2	(0.4)	380.8	379.4	380.8	-
Project Reserves	10.5	(0.1)	10.4	9.9	10.4	-
	12.1	(9.7)	2.4	-	2.4	-
Total Carquinez Bridge Replacement Project <sup>1</sup>						
	528.2	(10.0)	518.2	513.7	518.2	-
Notes	Other Contracts include EAs 01301_,01302_,01303_,01304_,01305_,01306_,01307_,01308_,01309_,0130A_,0130C_,0130D_,0130F_,0130G_,0130H_,0130J_,00453_,00493_,04700_,00607_,2A270_,and 29920_ and all Project Right-of-Way					

<sup>1</sup> Figures may not sum up to totals due to rounding effects.

## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (09/2013)	Cost to Date (06/2013)	Cost Forecast (09/2013)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation</b>						
Capital Outlay Support						
BATA Funding	2.2	(0.8)	1.4	1.4	1.4	-
Non-BATA Funding	8.6	1.8	10.4	10.4	10.4	-
Subtotal	10.8	1.0	11.8	11.8	11.8	-
Capital Outlay Construction						
BATA Funding	40.2	(6.8)	33.4	33.3	33.4	-
Non-BATA Funding	51.1	-	51.1	51.1	51.1	-
Subtotal	91.3	(6.8)	84.5	84.4	84.5	-
Project Reserves	-	0.8	0.8	-	0.8	-
Total	102.1	(5.0)	97.1	96.2	97.1	-
<b>Richmond-San Rafael Bridge Deck Overlay Rehabilitation</b>						
Capital Outlay Support						
BATA Funding	4.0	(0.7)	3.3	3.3	3.3	-
Non-BATA Funding	4.0	(4.0)	-	-	-	-
Subtotal	8.0	(4.7)	3.3	3.3	3.3	-
Capital Outlay Construction	16.9	(0.6)	16.3	16.4	16.3	-
Project Reserves	0.1	0.3	0.4	-	0.4	-
Total	25.0	(5.0)	20.0	19.7	20.0	-
<b>Richmond Parkway Project (RM 1 Share Only)</b>						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay Construction	5.9	-	5.9	4.3	5.9	-
Total	5.9	-	5.9	4.3	5.9	-
<b>San Mateo-Hayward Bridge Widening</b>						
Capital Outlay Support	34.6	(0.5)	34.1	34.1	34.1	-
Capital Outlay Construction	180.2	(6.1)	174.1	174.1	174.1	-
Capital Outlay Right-of-Way	1.5	(0.9)	0.6	0.6	0.6	-
Project Reserves	1.5	(0.5)	1.0	-	1.0	-
Total	217.8	(8.0)	209.8	208.8	209.8	-
<b>I-880/SR-92 Interchange Reconstruction</b>						
Capital Outlay Support	28.8	35.8	64.6	62.2	64.6	-
Capital Outlay Construction						
BATA Funding	85.2	68.4	153.6	150.2	153.6	-
Non-BATA Funding	9.6	-	9.6	-	9.6	-
Subtotal	94.8	68.4	163.2	150.2	163.2	-
Capital Outlay Right-of-Way	9.9	7.3	17.2	15.4	17.2	-
Project Reserves	0.3	(0.3)	-	-	-	-
Total	133.8	111.2	245.0	227.8	245.0	-
<b>Bayfront Expressway Widening</b>						
Capital Outlay Support	8.6	(0.2)	8.4	8.4	8.4	-
Capital Outlay Construction	26.5	(1.5)	25.0	24.9	25.0	-
Capital Outlay Right-of-Way	0.2	-	0.2	0.2	0.2	-
Project Reserves	0.8	(0.3)	0.5	-	0.5	-
Total	36.1	(2.0)	34.1	33.5	34.1	-

## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (09/2013)	Cost to Date (07/2013)	Cost Forecast (09/2013)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
US 101/University Avenue Interchange Modification						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay Construction	3.8	-	3.8	3.7	3.8	-
Total	3.8	-	3.8	3.7	3.8	-
Subtotal BATA Capital Outlay Support	358.3	64.7	423.0	419.5	423.0	-
Subtotal BATA Capital Outlay Construction	1,569.8	217.5	1,787.3	1,754.1	1,787.3	-
Subtotal Capital Outlay Right-of-Way	42.5	6.2	48.7	43.1	48.7	-
Subtotal Non-BATA Capital Outlay Support	14.0	4.0	18.0	17.6	18.0	-
Subtotal Non-BATA Capital Outlay Construction	92.4	9.5	101.9	82.9	102.0	0.1
Project Reserves	35.6	(8.1)	27.5	-	27.4	(0.1)
Total RM1 Program	2,112.6	293.8	2,406.4	2,317.2	2,406.4	-
Notes:	1 Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Includes Non-TBSRP Expenses for EA 0438U_ and 04157_					
	2 San Mateo-Hayward Bridge Widening includes EAs 00305_,04501_,04503_,04504_,04504_,04505_,04506_,04507_,04508_,04509_,27740_,27790_,04860_					



Final Adjustment of Cable Hauling System

The San Francisco-Oakland Bay Bridge a Few Minutes before the Seismic Safety Opening



The New San Francisco-Oakland Bay Bridge Self-Anchored Suspension Bridge on right and Old Bridge on left

# Project Photos

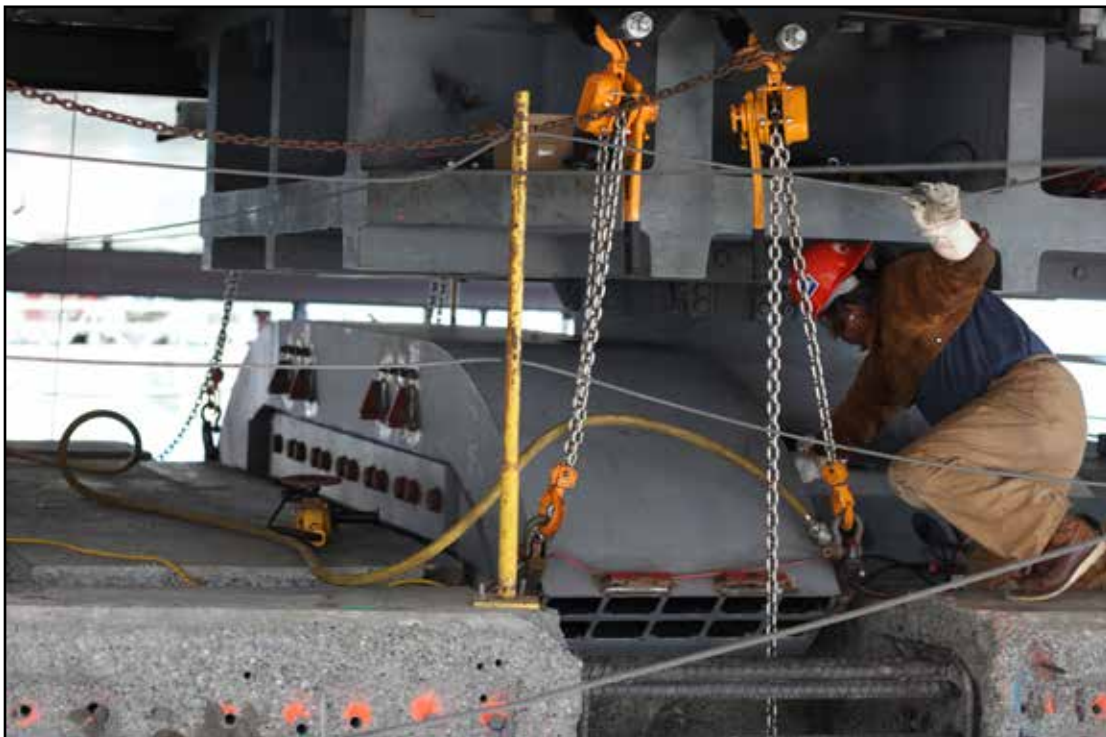


## Appendix E: Project Progress Photographs

### Self-Anchored Suspension (SAS) Bridge Field Work



Demolition of the Temporary Truss Foundation



Upper Saddle at the north side of Shear Key S2



Welding and Grinding Elevator Base Support to Tower Skin



Trimmed E2 Shear Key Anchor Rods



Self Anchored Suspension Bridge Looking West to San Francisco with the New Yerba Buena Transition Structure on the right and the Existing Bay Bridge on the left and the Toll Plaza in the forefront



## Appendix E: Project Progress Photographs

### Oakland Touchdown (OTD)



First Permanent Palm Tree Placement in Progress at OTD #2 between the New Bridge eastbound and westbound OTD Structures



OTD #2 Permanent Bike Path Progress Looking east



OTD Permanent Bike Path in Progress Looking east toward Oakland and Temporary Bike Path in Use at right

## Appendix E: Project Progress Photographs

### Yerba Buena Island Transition Structure (YBITS)



Cantilever Deck Removal in Progress westbound



Cantilever Deck Removal in Progress eastbound



Permanent Structure at right and Cantilever of Old San Francisco-Oakland Bay Bridge Demolition Underway at left

## Appendix F: Glossary of Terms

### Glossary of Terms

**AB 144/SB 66 BUDGET:** The planned allocation of resources for the Toll Bridge Seismic Retrofit Program, or subordinate projects or contracts, as provided in Assembly Bill 144 and Senate Bill 66, signed into law by Governor Schwarzenegger on July 18, 2005, and September 29, 2005, respectively.

**AB 144/SB 66 PROJECT COMPLETE BASELINE:** The planned completion date for the Toll Bridge Seismic Retrofit Program or subordinate projects or contracts.

**APPROVED CHANGES:** For cost, changes to the AB 144/SB 66 Budget or BATA Budget as approved by the Bay Area Toll Authority Commission. For schedule, changes to the AB 144/SB 66 Project Complete Baseline approved by the Toll Bridge Program Oversight Committee, or changes to the BATA Project Complete Baseline approved by the Bay Area Toll Authority Commission.

**AT COMPLETION VARIANCE or VARIANCE (cost):** The mathematical difference between the Cost Forecast and the Current Approved Budget.

**BATA BUDGET:** The planned allocation of resources for the Regional Measure 1 Program, or subordinate projects or contracts as authorized by the Bay Area Toll Authority as of June 2005.

**BATA PROJECT COMPLETE BASELINE:** The planned completion date for the Regional Measure 1 Program or subordinate projects or contracts.

**COST FORECAST:** The current forecast of all of the costs that are projected to be expended so as to complete the given scope of the program, project, or contract.

**COST TO DATE:** The actual expenditures incurred by the program, project or contract as of the month and year shown.

**CURRENT APPROVED BUDGET:** The sum of the AB 144/SB 66 Budget or BATA Budget and Approved Changes.

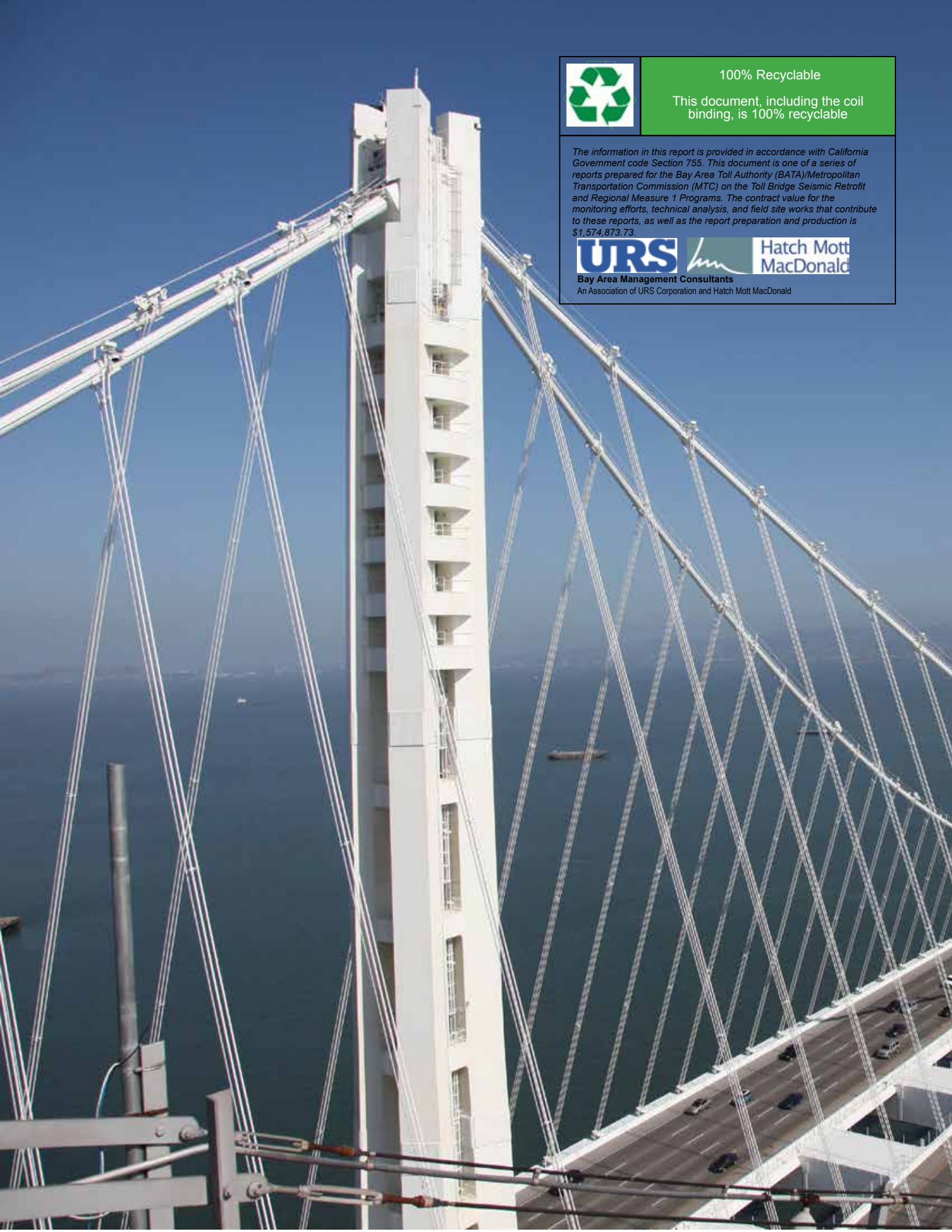
**HINGE PIPE BEAMS:** Pipes between roadway sections designed to move within their sleeves during expansion or contraction of the decks during minor events, such as changes in temperature. The beams are designed to absorb the energy of an earthquake by deforming in their middle or “fuse” section. Hinge pipe beams are also found at the western piers where the SAS connects to the YBITS (Hinge “K” pipe beams).

**PROJECT COMPLETE CURRENT APPROVED SCHEDULE:** The sum of the AB 144/SB 66 Project Complete Baseline or BATA Project Complete Baseline and Approved Changes.

**PROJECT COMPLETE SCHEDULE FORECAST:** The current projected date for the completion of the program, project, or contract.

**SCHEDULE VARIANCE or VARIANCE (schedule):** The mathematical difference expressed in months between the Project Complete Schedule Forecast and the Project Complete Current Approved Schedule.

**% COMPLETE:** % Complete is based on an evaluation of progress on the project, expenditures to date, and schedule.



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*The information in this report is provided in accordance with California Government code Section 755. This document is one of a series of reports prepared for the Bay Area Toll Authority (BATA)/Metropolitan Transportation Commission (MTC) on the Toll Bridge Seismic Retrofit and Regional Measure 1 Programs. The contract value for the monitoring efforts, technical analysis, and field site works that contribute to these reports, as well as the report preparation and production is \$1,574,873.73.*



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**Bay Area Management Consultants**

An Association of URS Corporation and Hatch Mott MacDonald





The New San Francisco-Oakland Bridge Seismic Safety Opening



## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** October 29, 2013

**FR:** Tony Anziano – Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 4a  
San Francisco-Oakland Bay Bridge Updates  
Item- E2 Update

---

**Recommendation:**  
**APPROVAL**

**Cost:**  
NA

**Schedule Impacts:**  
NA

**Discussion:**  
Items 4a1, E2 CCOs, and 4a2, E2 Budget/Testing will be sent under separate cover.

**Attachment(s):** NA

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** October 29, 2013

**FR:** Tony Anziano – Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 4b  
San Francisco-Oakland Bay Bridge Updates  
Item- Corridor Update / Schedule

---

**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

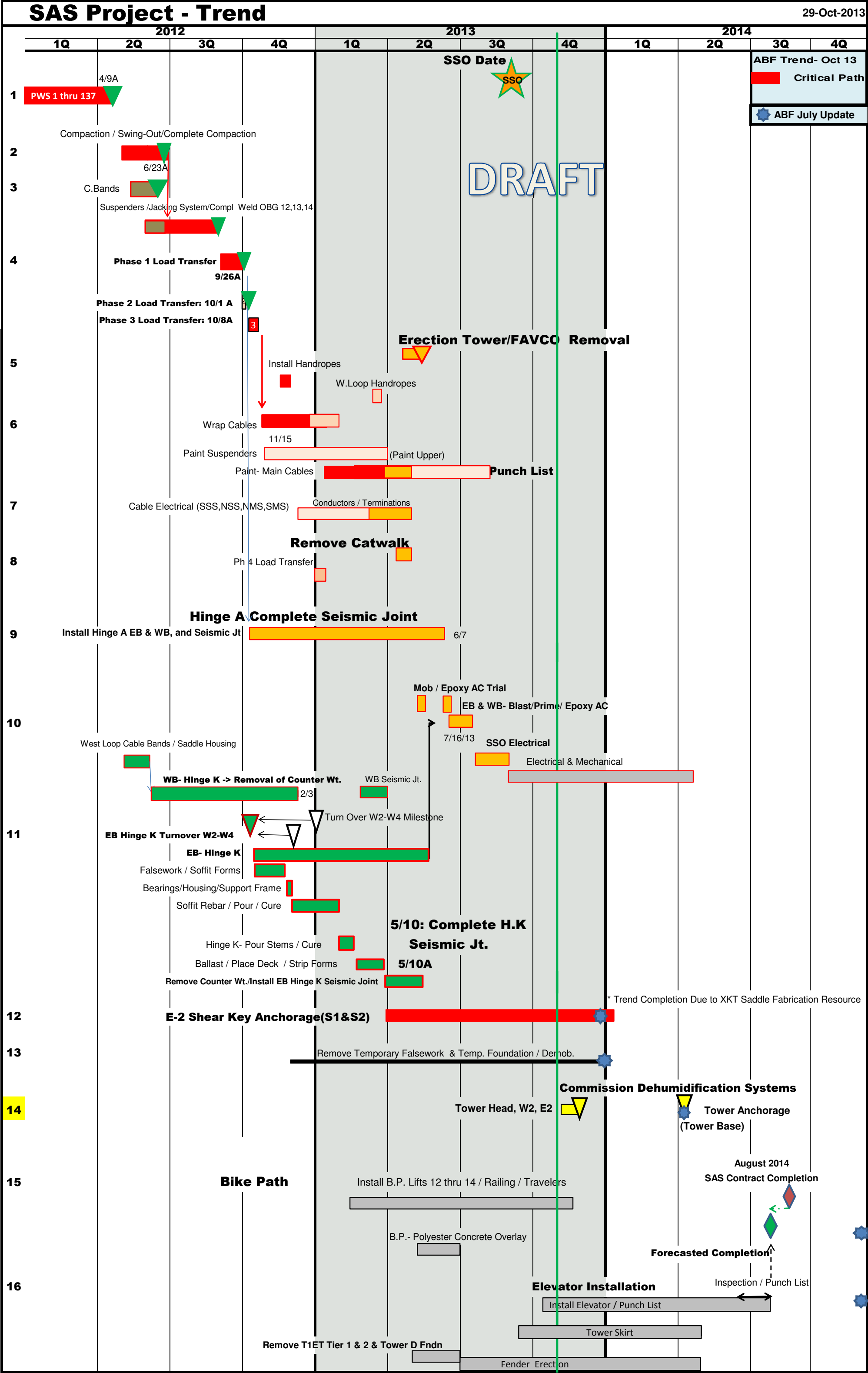
**Discussion:**

A verbal corridor update will be provided at the TBPOC meeting on November 5, 2013.

Attached are summary schedules for reference and further discussion at the meeting.

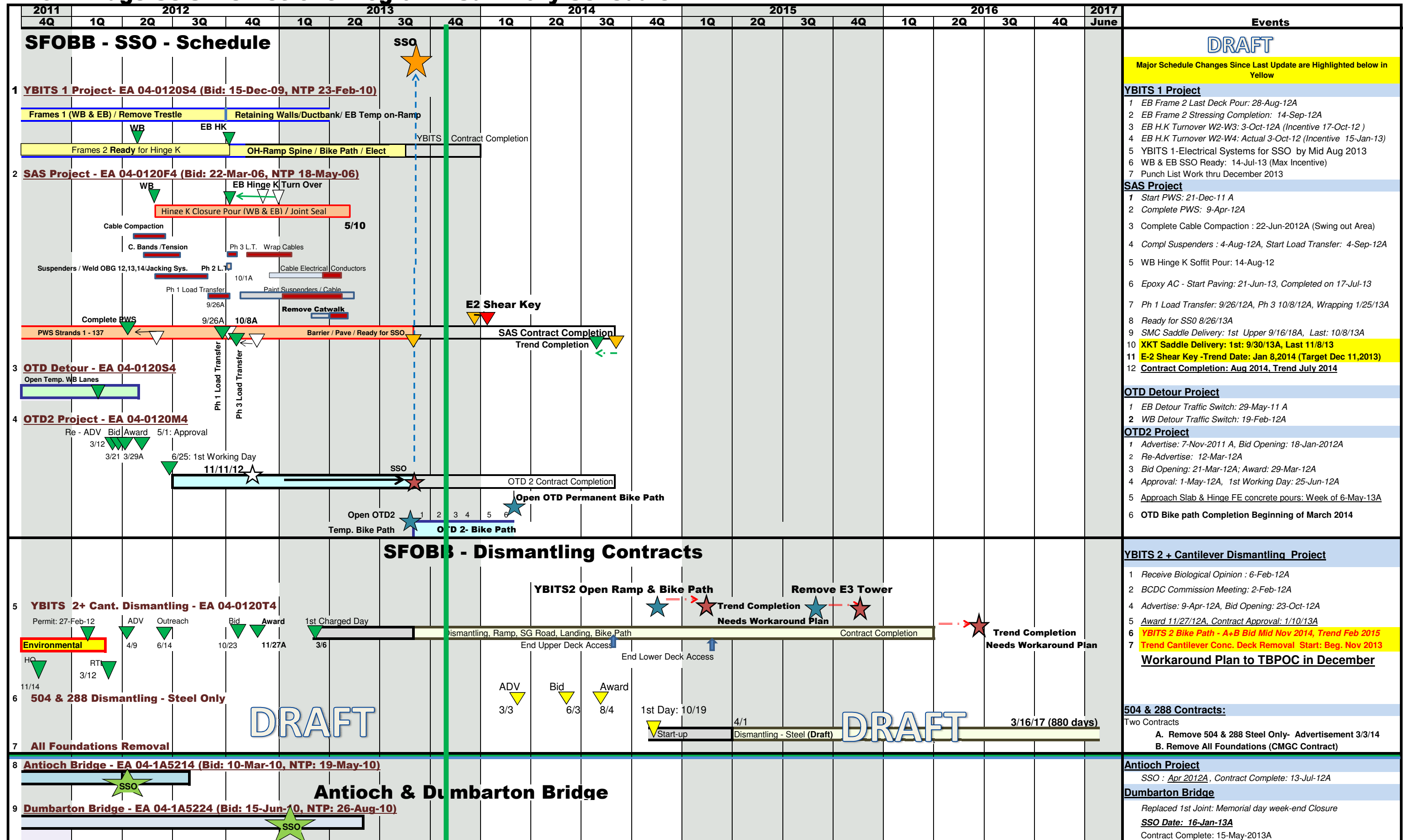
**Attachment(s):**

1. SAS Project – Trend
2. Toll Bridge Seismic Retrofit Program – Summary Schedule



## Toll Bridge Seismic Retrofit Program - Summary Schedule

**0/29/2013**



## *Memorandum*

**TO:** Toll Bridge Oversight Committee (TBPOC)    **DATE:** October 29, 2013

**FR:** Andrew Fremier, Deputy Executive Director, Operations, MTC/BATA

**RE:** Agenda No. - 4c  
Item – San Francisco-Oakland Bay Bridge Updates  
Update on Gateway Park and Inter-Urban Electric Railway  
Bridge Yard Shop (IERBYS)

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**Recommendation:**  
**APPROVAL**

**Cost:**  
TBD

**Schedule Impacts:**  
TBD

**Discussion:**

Given the momentum from recent successes, the Bay Area Toll Authority staff is requesting TBPOC approval to modify a number of seismic and rehabilitation projects to improve the bike path experience and to facilitate future park development. Most recently in the corridor, we have achieved significant success and progress on the following:

SFOBB East Span Bicycle/Pedestrian Pathway

- Usage counts of 4000+ per weekend.
- Approved \$4.0 million CCO on OTD2 to accelerate completion of the east end of the bicycle/pedestrian pathway.
- Secured additional temporary pathway parking at Maritime and Burma.

SFOBB Maintenance Complex

- Completed pile driving operations for Maintenance Complex Phase 1.
- Planning and design of Phases 2 and 3 are on-going.

IERBYS (Sawtooth) Building

- TBPOC has approved funding of interim rehabilitation, including a seismic retrofit of the building. Interim rehabilitation to IERBYS Building is on-going. Caltrans plans on finishing the design of the seismic retrofit in December 2013.

## *Memorandum*

- The building has full occupancy use of the low bay area. The high bay area has limited occupancy use as a storage area, as per past warehouse use. A determination on final use of the high bay area needs to be made to continue work on the building, regardless as part of the Maintenance Complex Project or Gateway Park Project.

### Gateway Park Project

- Completed project concept report for project.
- Proceeding with PAED phase of project.

### Request

The Bay Area Toll Authority staff is requesting TBPOC approval to modify a number of seismic and rehabilitation projects to improve the bike path experience and to facilitate future park development.

### SFOBB East Span Bicycle/Pedestrian Pathway

- Given the narrowness of the mole area, the Gateway Park concept had envisioned minimal vehicle access for bridge, park, and utility maintenance at the bridge touchdown. All other park users would be staged just east of the bio-retention pond. If the Oakland touchdown plaza and outfall crossing is constructed as planned, BATA staff believes it would be difficult to remove later and add expense to implement the park concept. BATA staff requests in lieu of the touchdown plaza that a parking lot and outfall crossing east of the bio-retention pond be constructed for pathway access. While this proposed change has not yet been fully explored, staff believes it to be feasible. While some construction cost can be covered by the deletion touchdown plaza, overall there would be a to-be-determined cost and scheduled impact to the program.

### IERBYS (Sawtooth) Building

- BATA staff is requesting that the recently renovated low bay, parking lot, and terrace of the building be repurposed for PIO use as soon as possible. This would provide pathway users an immediate access to a needed rest stop with water and other facilities
- BATA staff is requesting TBPOC consensus on the future of the IERBYS Building. Currently, the building is proposed to be repurposed for park uses as part of the Gateway Park Project and for a training facility as part the SFOBB Maintenance Complex Project. BATA staff believes that there can be beneficial shared use of the building and adjacent parking for both projects. Both projects will require occupancy (Title 24) improvements of the building if used. With consensus on the occupancy improvements, staff can be given direction to perform final access upgrades so that the entire building (high bay) can be repurposed in the shortest time frame possible for either project without precluding either project.

## *Memorandum*

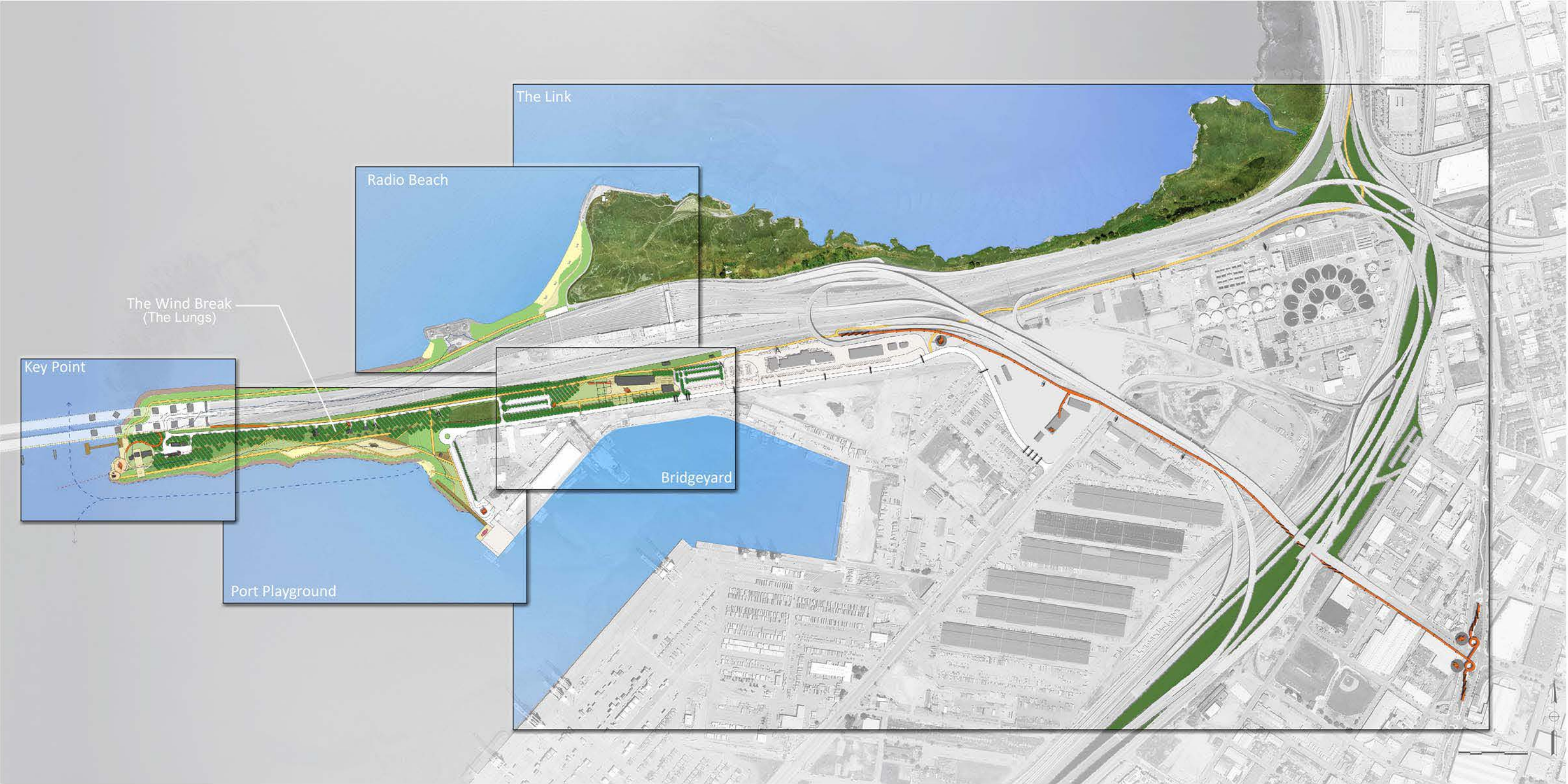
### SFOBB Maintenance Complex

- Further with consensus on joint use of the IERBYS parking lot, modifications for maintenance complex access can be made to improve pathway use and safety by moving maintenance vehicles off the proposed shared pathway and onto an improved Burma Road.

Staff proposes to return to the TBPOC at a later time to seek additional direction on several other items related to Gateway Park, including governance and reuse of portions of the bridge.

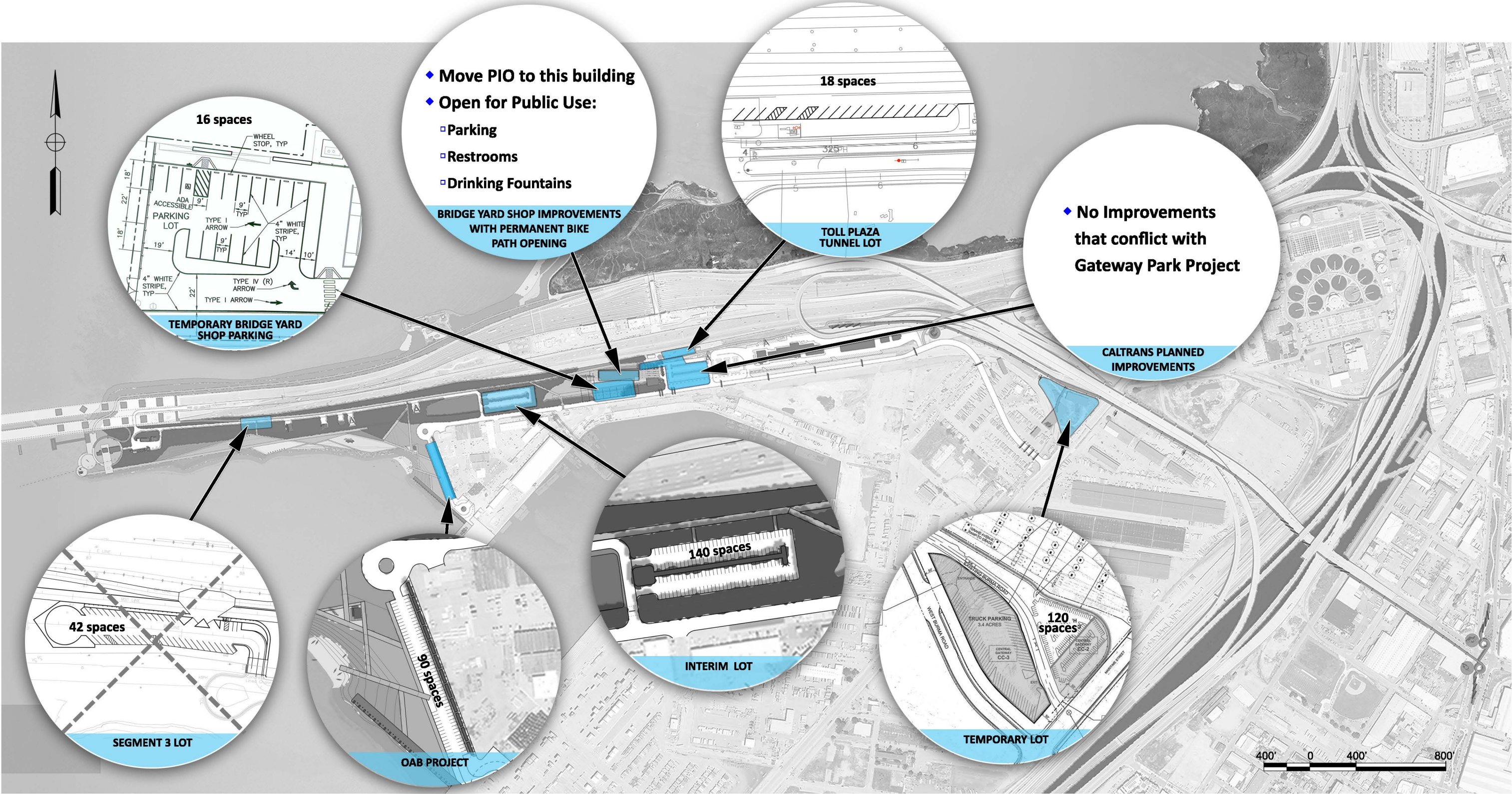
### **Attachment(s):**

1. Park Areas
2. Current and Near Term Improvements Along Burma Road
3. BATA-Proposed Parking Lot



# Current and Near Term Improvements Along Burma Road

October 17, 2013





## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** October 29, 2013

**FR:** Tony Anziano – Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 5a  
Other Business  
Item- TBPOC 2014 Calendar

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**Recommendation:**

For Information Only

**Cost:**

NA

**Schedule Impacts:**

NA

**Discussion:**

The frequency of TBPOC meetings in 2014 will be discussed at the TBPOC meeting on November 5, 2013.

**Attachment(s):** NA